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THOMAS DWIGHT, Jr., M.D.
} EDITORS.
F. W. DRAPER, M.D., ASSISTANT EDITOR.

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CONTRIBUTORS TO VOLUME LXXXVIII.

Blake, John G., M.D., Boston.
Bowditch, Henry P., M.D., Boston.
Cheever, David W., M.D., Boston.
Cotting, Benj. E., M.D., Boston.
Derby, George, M.D., Boston.
Derby, Hasket, M.D., Boston.
Dwight, Thomas, Jr., M.D., Boston.
Edes, Robert T., M.D., Boston.
Fifield, W. C. B., M.D., Boston.
Fitz, Reginald H., M.D., Boston.
Godding, William W., M.D., Taunton.
Goss, Francis W., M.D., Boston.
Green, J. Orne, M.D., Boston.
Hayden, David H., M.D., Boston.
Holmes, Howland, M.D., Lexington.
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Hoskin, Edward H., M.D., Lowell.
Johnson, William O., M.D., Boston.
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Knight, Frederick I., M.D., Boston.
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Lincoln, David F., M.D., Boston.
Lothrop, Charles H., M.D., Lyons, Ia.
Luce, Lyman H., M.D., Falmouth.
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Parsons, C. W., M.D., Providence, R. I.
Richardson, Wm. L., M.D., Boston.
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Vance, Reuben A., M.D., New York.
Vermyne, J. J. B., M.D., New Bedford.
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Webber, Samuel G., M.D., Boston.
White, James C., M.D., Boston.
Wigglesworth, E., Jr., M.D., Boston.
Wilder, Burt G., M.D., Utica, N. Y.
Wood, Edward S., M.D., Cambridge.

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Original Communications.

MODERN OVARIOTOMY.

By David W. Cheever, M.D. Harv.

The great mortality which formerly attended this operation has become a thing of the past in the hands of certain operators. Unfortunately for us, however, a large percentage of fatality still discourages the surgeon in this community. This is more especially true of New England, and above all of Boston, than of other parts of America. For in Philadelphia and New York, Atlee, Sims, Peaslee and Thomas have attained many favorable results, while here we can only infer the amount of success of ovariotomists by their reticence from publishing any detailed statistics of their cases.

But it is to England that we must look for the successful revival of this operation; and the wonderful percentage of recoveries attained by Mr. T. Spencer Wells have attracted to him patients from all parts of Europe; while his hospital is attended by physicians from the whole civilized world.

While in London, during the past summer, I enjoyed, through the courtesy of Mr. Wells, unusual facilities for seeing his operations and the after-treatment of his cases. I have, therefore, thought that an abstract of some notes taken on the spot might be of interest to the profession here.

While I was in London, Mr. Wells completed his five hundredth case, and the mortality had steadily declined, until in the fifth hundred, 80 per cent. recovered and only 20 per cent. died. A ratio of recovery of *four-fifths* is far above that of most other capital operations, amputation of the thigh being followed by a mortality of about 50 per cent.; strangulated hernia, 45 per cent.; and some being even larger.

So far as I observed, Mr. Wells's operations had the following peculiarities:

First—In diagnosis, established, in cases of doubt, by tentative tappings, microscopical and chemical examination of cyst contents, &c.

Second—In the least amount of handling of the patient possible; no one touching the abdomen but the operator.

Third—Celerity and decision in operating. This was very noticeable; the time consumed, the period of exposure of the abdominal cavity, and the proportionate shock being much less than in other operations I had seen.

Fourth—Personal care in subsequent dressing and nursing. In this the operator was much aided by a corps of nurses, trained under his own eye in his hospital.

The Samaritan Hospital, for women and children, of which Mr. Wells is surgeon, is an ordinary London dwelling house of brick, five stories high. The stairway is in the centre, and the rooms, front and rear. Each room has an open soft-coal fire, a ventilator over the outer windows, and one opening into the central stairway. The latter has a ventilator at the head of the stairs. The hospital has been in use for twelve years. Sometimes there have been cases of septicæmia, when it was necessary to clear it out and whitewash. After operation the patient always has a room to herself.

During the year 1871 *fifty-six* operations of ovariotomy were performed here. The first successful operation was performed in 1858. Ovariotomy had been very fatal in the other London hospitals, thus: at St. Bartholomew's, 12 cases, 8 deaths; Middlesex, 8 cases, 7 deaths; King's College, 7 cases, 6 deaths; St. George's, 7 cases, 5 deaths; University College, 5 cases, 4 deaths; Guy's, 44 cases, 21 deaths; total, 83 cases, 51 deaths. At the Samaritan Hospital, 106 operations, 30 deaths. In other words:

In five large hospitals,	mortality,	76 per cent.
Guy's Hospital,	"	47 per cent.
Samaritan Hospital,	"	27 per cent.

These results show what can be done in smaller hospitals in comparison with the larger ones.

Case I. The patient was about 40 years old, not excessively large, and in good condition. She was placed on her back on a table, with the head and shoulders a little raised. She was strapped down by a broad webbing over the knees, and wristlets fastened to a strap, which passed under the table. The whole body was covered with a sheet of rubber cloth, with an oval cut out over the abdomen. The edges of this oval were made to adhere to the abdomen by adhesive plaster.

Bi-chloride of methylene was the anæsthetic used. About ℥ v. were consumed in half an hour. It was given cautiously with an atomizer. Mr. Wells has used no other anæsthetic for four years; he thinks it less likely to be followed by nausea. In about eight minutes the patient was asleep.

The first incision was about four inches long, from below the umbilicus to the pubes. He cut down rapidly to the peritoneum. Bleeding was checked by forceps left on. On opening the peritoneum the uterus presented itself below, and above this was the white cyst. A very large trocar, with clamps and tube attached, was at once plunged into the cyst, and as it collapsed it was seized with a peculiar vulsellum and drawn up under the hooked clamps. This cyst was of moderate size; another, and larger one, immediately appeared above it. The external wound was now slit up above the umbilicus. The first cyst was seized with strong forceps, and the opening pinched up. The trocar was then plunged into the second cyst, from which a large quantity of fluid escaped. This also was dragged up under the hooked clamps, and by strong traction pulled out of the abdomen. There were no adhesions.

The second cyst was now dragged entirely out, the clamp put on and the pedicle cut, without hæmorrhage. The first cyst was then easily dragged out, clamped and cut in the same way.

Thus double ovarian disease was removed; both ovaries extirpated, and both broad ligaments clamped. The sides of the wound were held together by an assistant.

Mr. Wells now passed a large soft sponge into the abdomen, and left it. He then rapidly passed sutures of silk, with two needles, from within outwards; taking stitches alternately at either end. The sponge was withdrawn the last thing, and the wound closed with eight sutures. There was very little hæmorrhage, and no fluid escaped into the abdomen.

Not satisfied with the large protruding pedicles and two clamps, he now passed a large needle through the pedicles, and tied them up around it with hemp twine. Finally he took away the clamps, and cut away the projections of the pedicle. The wound was padded around with bits of sheet lint; and strips of plaster drawn across; higher up, a large wad of fine cotton, and more adhesives. The patient was then immediately removed, dry, to bed.

She was on the table about half an hour, owing to the delay for the final arrangement of the pedicles. She retained a good color, pulse and warmth; there was no vomiting. The temperature of the room was about 80°; a warm June day, with the windows open. No disinfectants were used. The urine was to be drawn every 6 hours. A little opium given to relieve pain, if needed. The sutures to be removed the fourth day. The clamp to be left to come away of itself, usually about the seventh day. The wound to be dressed dry; no moist applications. Lint to be changed when soiled.

I last saw this patient on the *sixth* day, doing well; the sutures were out, and the pedicle partially sloughed away. She was eating quail. I afterwards learned that she recovered.

Case II. Patient older, tumor larger, marks of two tappings. Four drachms of bi-chloride of methylene. Incision of four inches. On opening the peritoneum an ascitic fluid ran out. The hand was passed in between the abdominal parietes and the cyst, and adhesions were broken down. The cyst was tapped; the trocar clamps hooked on, and an attempt made to deliver the cyst, but in vain. The cyst was then slit open with a knife, and the two cut sides seized with forceps and held open. The hand was passed into the cyst, and numerous others broken down and evacuated. The cyst was then dragged out, and an attachment to the omentum torn away. Near the pedicle, the cyst was found to be attached to the side of the uterus, by inflammatory adhesion. The pedicle was clamped and cut. Then the large adhesion was transfixed with a needle and ligatured, and divided. There was a good deal of hæmorrhage. This was checked with silk ligatures. These were cut short off, and returned into the abdomen. The pedicle was finally secured with silk ligatures, and the clamp taken off. The pedicle was dropped back into the abdomen. The omentum was ligatured at several bleeding points, and the thread cut short off. The ragged omentum was trimmed, and the whole returned into the abdomen. The wound was closed by nine silk sutures. *Nothing was left outside.* The abdominal cavity was freely sponged out, and the omentum left out fifteen minutes. The patient had to be stimulated a little. I saw this patient on the *fifth* day, doing perfectly well. The sutures were out, and the wound closed by first intention. On returning to London in September, I learned that she had recovered.

Case III. Patient was middle-aged, somewhat reduced, abdomen large. From first incision to clamping and cutting pedicle, only eight minutes. The abdomen was open fifteen minutes. The patient was back in bed in thirty minutes. No vomiting; good color; gentle, warm perspiration when put to bed. Anæsthesia not very profound. The cyst was very thin, and was punctured with the knife on opening the peritoneum. No trocar was used. Other cysts within it were punctured, broken down and emptied. The mother cyst was a little adherent to the omentum and the peritoneum. The cyst was separated from the abdominal walls, by the hand inside of the cyst; Mr. Wells considering this the best way, as there is thus no risk of stripping off the peritoneum. The pedicle was small, and was clamped. I saw this patient on the fourth day, doing well. She recovered.

Case IV. Mr. Wells stated this to be a doubtful case. An exploratory incision revealed a large, solid, vascular, uterine tumor, and a cyst above it and adherent to it. This cyst, when tapped, gave exit to a bloody fluid, in large quantity, but when tapped before the operation, it had shown a pure ovarian fluid. The cyst could neither be removed nor brought to the surface to drain, so it was emptied, and the abdomen sewed up. This patient recovered from the operation.

Three of these operations were in private houses. Mr. Wells selects a room at the top of the house, and has a soft-coal open fire. The sponges are cleansed with sulphurous acid, and warmed at the fire. He gives a good diet as soon as the patient wants it. The urine is drawn every six hours. The bowels moved after the 7th day. No one dresses the patient but Mr. Wells. He relies a good deal on the temperature, which is taken frequently. He says it is the little things that tell. He does not believe the operation is followed by any more shock than an amputation. The absence of shock, in the cases I saw, was one of the most remarkable peculiarities.

He says the ligatures, cut short and dropped in, take care of themselves. No carbolized ligatures are used; plain silk, or hemp.

His assistant told me that he made an autopsy a year after the operation, where the ligatures were left in, and he could barely find a trace of them.

1267 *Washington Street.*

IN-FLESHED TOE-NAIL.

A NEW OPERATION FOR RADICAL RELIEF.

By B. E. Cotting, M.D. Harv.
Consulting Surgeon to the Boston City Hospital.

The selection of a suitable name for this extremely painful and persistent affection seems to have puzzled authors almost as much as has its etiology and proper treatment. It is called by them Ingrowing, In-grown, Incarcerated, and Incarnated Toe-nail—all misnomers except the last, if the term is intended to indicate the cause and nature of the malady. *In-fleshed Toe-nail* may not be thought an improvement, but it does not involve a theory, and sufficiently describes the condition as usually presented to the practitioner.

The affection has been known and appreciated from time immemorial, yet still remains one of the minor opprobria of our art. It is not necessary, however, to go over its history or to recount the numerous expedients for its relief, as the object of the present paper is to call the attention of the profession to a new, and, it is believed, an effective operation for the complete removal of the disease, applicable alike to all varieties and stages of its development. Any one who wishes it may learn how thoroughly the ancients understood such matters in *Paulus Ægineta* (Translation and Commentaries by Adams, Syd. Soc. Ed.) vol. ii. pp. 414–415; can find an elaborate essay on the causes, varieties, and treatment of the disease in *Dupuytren's Clinique Chirurgicale*, vol. iv. pp. 379–413; can obtain an analysis of the doctrines of later writers in *Chelius's Surgery*, by South, vol. i. pp. 221–229, and of the practice of fifteen of the foremost French surgeons in *Table Anal. du Journal de Méd. et Chir. Pratiques*, 1850–69, p. 337; can get an authoritative sketch in *Holmes's Surgery*, vol. iv. pp. 795–6, an account of the practice in different London Hospitals in the *Lancet*, May 29, 1869, pp. 747–8, and the last dictum in Gross's great work, vol. ii. pp. 1042–3, revised and issued from the press in 1872. Moreover, most text-books and manuals have a word to say about it; and many reports of cases, and special projects in superabundance, have lately appeared in Medical Periodicals at home and abroad—indicating the still unsettled views of practitioners, and their dissatisfaction with methods of treatment hitherto devised. Indeed, it was undoubtedly this recent manifest dissatisfaction and disagreement on the part of the profession that induced a call for a re-statement of the operation now to be described (*see Boston Med. and Surg. Jour.*, Oct. 3d, 1872).*

Our operation consists in removing, with the knife, by a single stroke, all the diseased parts, *together with quite a large piece of the sound flesh, skin deep, from the side of the toe*—sometimes making an open wound of, say, nearly an inch long by half or three-fourths of an inch wide. No portion of the nail need be removed; but if, in order to fully secure all the diseased flesh, overlapping or undergrowing, a segment of the nail is involved in the cut, no harm comes of it. The result is quite as good, perhaps better.

Although the operation requires but a moment, and is not much more painful than the removal of an equal portion of healthy flesh, it is generally advisable to put the patient under ether for its performance. Occasionally a hardy fellow will submit to it without the anæsthetic.

By this operation, in the first place, all the diseased parts are removed at once, and a clean, healthy wound substituted; to be treated as any other open freshly-cut wound, and to be allowed to heal as soon as possible by granulation. Generally, the healing is rapid, and without interruption.

In the second place—and this is the principle on which success depends—as the comparatively large and superficial wound heals (a cicatrix being always much less in size than the original wound) there is a contraction of the parts, and a drawing-in of the skin towards the centre from all sides, including, of course, that near the nail; so that when the wound is healed there is nothing left in the way for the nail to impinge upon in its subsequent normal growth. The shape, also, of the toe itself is usually much improved by the operation.

Thus, as may be seen, the operation is a very simple one; but it differs from all others hitherto described, in itself, and in the principle on which it is founded—that of cicatricial contraction. That it is effective may be inferred from the fact that, after many trials during twenty or more years, no case of failure has yet occurred; at least no patient has yet returned to complain of its want of success. Recurrence after other procedures is common enough. This operation has been repeatedly and completely successful when the usual methods, scraping, paring, compressing, packing with lint, uplifting or separating the nail from the flesh by metallic or other substances, removal of "fungous," "callous" or other formations by caustic or the knife, evulsion of a part of the nail at the side, or the whole of it—the last, "the only method really serviceable" (Erichsen), a "barbarous practice" (Gross)—and other measures of more or less "cruelty," had been tried in vain.

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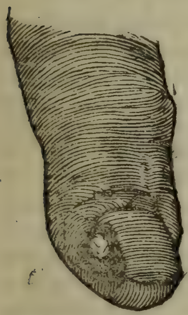
* Prof. Vanzetti has, within the past half year, published in Venice a folio, of 120 pages, on this disease, advocating the application of the nitrate of lead. The work has not yet been received in this country.

It would not be very difficult to hunt up a goodly number of cases illustrative of the successful results of the new operation, some of which have been years under occasional observation; one or two instances will suffice.

Only a few days after this paper was asked for, a case of the acute form of the disease offered for treatment. It had existed but two or three weeks, yet had already become intolerably painful, and so sensitive as to prevent walking and to quite lay up the patient. In anticipation of the possible use now to be made of it, a photograph was taken, from which the figure in the margin, No. 1, was copied. This figure will give a better idea of the parts and their diseased appearance than any verbal description. At an appointed time, the patient was etherized, and a portion of the toe was removed in the manner above described. The dotted lines in the figure mark the place of entrance of the knife, and also of its exit at the end of the toe—the width of the section at the side being about twice that seen in the picture. The wound was dressed with lint, merely. There was little or no subsequent suffering. The patient kept the bed only a day or two, and in two weeks went to church without difficulty. In four weeks, the recovery was complete.

1.



After full recovery, another photograph was taken which gives (figure 2) a very good representation of the toe in its present condition. The flesh is drawn quite away from the edge of the nail, which now grows out quite naturally. All the functions are restored.

2.

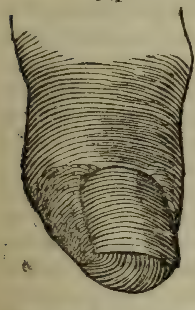
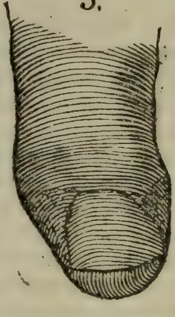


Figure 3 represents the present appearance of a toe operated on about two years ago for the disease in a chronic form. Both sides of both toes of this patient were badly affected, and had, during the previous ten or eleven years, resisted all kinds of treatment, even evulsion of the nails. Both toes were operated on at the same time—making four operations. No troublesome event followed. Three of the wounds healed rapidly; the fourth, though somewhat slower, soon did well, with only simple dressings. At the time of the operation, the toes were painfully ulcerated, much swollen, and club-shaped.

3.



Walking had often been impossible. Now they are painless, of proper dimensions, and quite presentable in appearance. Ever since the operation, walking has ceased to be difficult, and is now performed with pleasure. No disease remains.

Roxbury, Boston, December, 1872.

Clinical Lecture.

ON THE PRIMARY DENTITION OF CHILDREN.

By Francis Minot, M.D. Harv.,

Clinical Lecturer on the Diseases of Women and Children in Harvard University.

Gentlemen,—The subject of our lecture to-day is the Dentition of Infants, one which it is important that you should be perfectly familiar with, otherwise you will be frequently embarrassed in the treatment of the diseases of a large class of those who are to come under your care. I have been struck with the fact that many young practitioners have but an imperfect acquaintance with the order in which the deciduous teeth make their appearance, and with the time of irruption of each successive group. Nor is this ignorance always confined to beginners. Physicians of many years' experience are sometimes unable to answer questions on this subject which should be familiar to every three-years' student. Not only does the condition of the primary dentition furnish an important element of prognosis in regard to the future development of the child, but any considerable departure from its normal process is apt to be attended by injurious consequences to his health. It has been well said by Vogel that although it cannot be maintained that all healthy children cut their teeth in the usual order and time, yet this much is certain, that those children who follow this order suffer the least from the difficulties and sequelæ of dentition. We will, therefore, consider now what is the normal order and time of the appearance of the temporary teeth.

You are all aware that the teeth in the human subject consist of two sets; the first of which, called the temporary or deciduous, and sometimes the *milk* teeth, twenty in number, which appear during infancy; and the second, or permanent set, thirty-two in number, occupying the period between early childhood and adult life. I need hardly remind you that the germs of both sets lie hidden in the jaws of the fœtus long previous to the time of birth; but we are now only concerned with the appearance above the gum, or, as it is familiarly termed, the *cutting* of the first set—in other words, with the primary dentition.

The primary dentition begins normally between the sixth and seventh month, proceeds in a definite order, and is completed at the age of two years and a half, or a little later. Exceptions to this sometimes occur in healthy children, but they are rare, while in those of delicate constitution, or where development is retarded from various causes, there is often delay or irregularity in the evolution of the milk teeth. Hence, an acquaintance with the order of succession of these serves as a means of estimating the general state of the constitution and the degree of development of young children. Moreover, as we shall see shortly, numerous questions concerning alimentation and the diagnosis, prognosis and treatment of disease in these subjects can only be satisfactorily answered by means of this knowledge.

Authorities differ somewhat as to the order in which the first teeth appear, as well as to the time of their irruption. I have found the data given by Dr. Eichmann, founded upon the observation of 400 children, to correspond pretty exactly with my own experience ; and it is sanctioned by the high authority of Dr. Schoepf Merei, of Pesth, by M. Trousseau, by Vogel and others. Dr. Eichmann states that the twenty deciduous teeth make their appearance in *five groups*, at five distinct periods, and in the great majority of cases in the following order :—the first group consists of the two lower median incisors, which generally appear between the 28th and the 33d week. In only three instances out of the 400 children did the first lower incisor appear as early as the 20th week, the next tooth, however, not appearing before the 31st week. Judging from my own observation, I should put six and a half months as the average date of the appearance of the first tooth. The second tooth frequently follows the first within a week, but it is not unusual for two or three weeks to elapse before the first group is completed.

The second group consists of the four upper incisors, of which the two central ones are the first to appear, the completion of the whole group requiring from three to six weeks. When a child has six teeth, therefore, there are four in the upper jaw and two in the lower. Trousseau observes that this fact, known to every woman who has had the care of young children, is strangely ignored by medical men, even by some who have written upon the very subject of dentition—and I am inclined to believe the observation is true of some practitioners of America, as well as France.

The third group includes the two lateral lower incisors and the four anterior molars. Generally, the upper molars are the first to come, next the lower incisors, and lastly the lower molars.

The fourth group consists of the four canine teeth, of which the two upper are called the eye teeth, and the two lower the stomach teeth.

The fifth group comprises the four posterior molars.

Although there are exceptions to the above order, yet they are rare in healthy children. There is more variation in the age at which each group begins to appear, as well as in the length of time required for its complete evolution ; but within certain limits the period is tolerably exact. The average age at which the first tooth pierces the gum may be stated at six and a half months, and the group is usually completed at seven months. The second group usually begins to appear at the age of nine months, and requires six weeks for its completion. The third group appears at the age of twelve and a half months, and is completed at fourteen months. The fourth group usually begins at eighteen months, and often requires eight weeks, and sometimes longer for its completion. The fifth group does not commonly appear before the age of twenty-six months, and also takes at least eight weeks before it is finished.

An important fact in the history of the primary dentition, and which must never be lost sight of by the practitioner, is, that after the irruption of each group, there is a pause of longer or shorter duration, which is quite constant for each interval. Thus between the first and second group there is a pause of two or three months. Between the second and third group the interval is of about two months' duration. Between the third and fourth group the interval is of from four to five months. Between the fourth and fifth group there is a pause of five months. I will arrange all these data in a tabular form, so that you may more easily comprehend them, and retain them in the memory.

1st group begins at 6½ months—completed at 7 months.
Pause of 2 or three months.
2d group begins at 9 months—completed at 10½ months.
Pause of 2 months.
3d group begins at 12½ months—completed at 14 months.
Pause of 4 to 5 months.
4th group begins at 18 months—completed at 21 months.
Pause of 5 months.
5th group begins at 26 months—completed at 30 months.

During the intervals between the successive groups the process of dentition is arrested, and the symptoms to which it often gives rise subside. The child is tranquil, sleeps well, is free from nervous and inflammatory troubles. Now is the time when any change which is to be made in the diet, mode of life, &c. should be begun. The important question of weaning should always be considered in reference to this period. If the mother be robust, and have plenty of milk, the child may be allowed to nurse, at least in part, with advantage until the fourth group is completed, when there will be an interval of five months in which he will be free from danger of convulsions or diarrhœa, and will have ample time to get accustomed to his new diet. Unfortunately, in a large number of cases, especially in cities, the supply of milk and the mother's strength require the child to be weaned earlier, and then, if possible, this should be done immediately after the completion of the third group, when the interval, though shorter than that which follows the canines, will yet be sufficient to permit the infant to get used to an artificial diet before the fourth begins to appear Of course, you will not be governed by the state of the teeth alone in this important question; other considerations, especially the season of the year, the mother's health, and the supply of breast milk will have due weight; but I wish to urge upon you that in the case of delicate children, with a tendency to nervous or inflammatory symptoms, weaning can be much more safely accomplished during the intervals between the successive groups of teeth than at any other time. With perfectly healthy and robust children such precautions are not always necessary, but in delicate, town-bred infants, in those which show any disposition towards convulsions, diarrhœa, hydrocephalus, or that indefinite array of symptoms which are often styled "scrofulous," they cannot be neglected without risk.

The *complications* of dentition in infants are chiefly manifested in those reflex phenomena which are due to the predominance of the spinal functions over those of the brain in early life. It is a law of the economy that in proportion as the influence of the cerebrum is suspended, or cut off, the energy of the reflex function of the spinal system is increased. Thus, during sleep, when the action of the brain is suspended, the exaltation of this function is shown by the sudden starts which may be excited by any external irritation, as tickling the soles of the feet, &c.; and the same thing may be observed in persons whose attention is completely absorbed, as while reading. So when the cerebral influence is cut off by disease or injury of the spinal cord or brain, the reflex phenomena excited by external irritation are much more energetic than in health. This you have occasionally seen exemplified in the hospital; the soles of the feet in a hemiplegic patient being tickled, the paralyzed limb will be drawn up quickly, sometimes violently: while the other limb, over which the will still has control, may not perhaps move at all. In cases of paraplegia, this involuntary twitching of the legs sometimes arises from the accidental irritation of the feet by the contact with the bedclothes, and is then a source of much annoyance to the patients. Now the development of the brain in infancy is comparatively imperfect, and its functions are feeble, and to the predominance of the spinal over the cerebral system is due the great frequency of convulsions and other disorders at this period of life. Whether the external irritant be the pain caused by the pressure of the tooth on the gum, or the presence of indigestible food in the intestines, or worms in the rectum, an impression is sent to the cord by an afferent nerve, an impulse is carried to the muscles by an efferent nerve, and the result is those violent and irregular muscular contractions which we call spasms or convulsions.

The convulsions of dentition sometimes come on without premonitory symptoms, the child being apparently in good health at the time; but they are frequently preceded by twitchings, wakefulness, vomiting, crying and other symptoms of disturbance. A fit generally begins by twitching of the muscles of the face, which becomes pale; the eyes are at first fixed and staring, and then turned strongly to one side; the whole body becomes rigid, the limbs became violently flexed and extended, while the head is often thrown to one side, and drawn backwards. The jaws are clinched and the tongue is often bitten. The breathing is at first suspended, so that the face soon grows livid, then it becomes very rapid and noisy, a little foam (sometimes bloody, if the tongue have been bitten) issuing from between the teeth. In a large number of instances the fit lasts but a few minutes, but occasionally it is hours before the movements cease. In any case, the child remains unconscious for a considerable time after the fit is over.

In a considerable number of cases an infant never has more than one fit, but often they are repeated, and sometimes with every tooth that is cut.

The first few times you are called to a child in a fit, unless the attack be over when you reach the patient (which, fortunately, is often the case), you will probably be puzzled to know what to do. The child will, perhaps, have been parboiled by being plunged into a hot bath; he has been anointed with goose grease, and poulticed with onions, *usque ad nauseam;* ipecac has been forced down his throat, and soap-suds into his rectum. The family is in consternation, and in their eagerness to tell you what they have done (which is the thing uppermost in the minds of a great many patients when they consult a doctor) you will find it difficult to get any account of the symptoms of the case. Recollect that in most cases there is very little to be done. The attack will generally come to a favorable end without any interference. In case it should show no signs of abatement, the best remedy is ether by inhalation. As soon as the patient comes under its influence, the spasmodic action of the muscles will cease, and he will soon fall into a quiet sleep, from which he should not be roused for hours. At your second visit, the gums should be carefully examined, and an incision should be made across any one which is swollen and hard, and such general directions as to the diet and hygienic treatment may be given as the case seems to require. Your opinion will be asked as to the danger of a recurrence of the convulsions. In answering this question, you will be guided by the general state of the patient's health, and partly by the progress which the dentition has made. If the child be feeble and delicate, with a large anterior fontanelle, at the age of twelve months, there is reason to fear an irritability of the nervous system which will find expression in convulsions when there is much peripheral irritation. So if the fourth group of teeth are just beginning to appear, there is danger that the attack will recur, perhaps more than once, before all the canines are through the gum. If, on the other hand, the child be well developed and healthy looking, if the hygienic surroundings are good, if one group of teeth is nearly completed, then there is reason to hope that the convulsions may not recur.

When a child seems predisposed to convulsive attacks, or if it have had more than one attack, the bromide of potassium will often be found of great service as a prophylactic. This medicine owes its value in these and similar affections to its remarkable sedative power over the reflex function of the spinal marrow. From five to fifteen grains, according to the age of the child, may be given at a time, when there is threatening of convulsions, and this dose may be repeated twice or thrice daily, according to circumstances. In many cases it will be found to be perfectly efficacious. Formerly, assafœtida, in enema, was given for this purpose, but the bromide is much more certain in its effects, besides far less disagreeable. Many children who are subject to convulsions during teething are pale, ill-nourished and feeble. The best prophylactics for such children are cod-liver oil and some preparation of iron. Of the former, from half a teaspoonful to a teaspoonful may be given three times daily. With regard to iron, there is no choice among the large number of preparations except so far as facility of administration goes. I usually prescribe the tartrate of iron and potassa for children, because it is less disagreeable to the taste and less constipating than most others. From two to five grains may be given, three times daily, dissolved in sweetened water.

The diarrhœa which sometimes complicates teething is chiefly of importance during hot weather. It varies in amount from a little looseness of the bowels to a large number of discharges daily. In any case, you should watch it carefully, and endeaver to restrain it if it become at all urgent. Formerly, a little diarrhœa was thought to be rather beneficial than otherwise during the cutting of a tooth, but I believe this opinion is no longer held. At any rate, I advise you to give it no quarter in hot weather, as it then too often ends in cholera infantum, a disease which destroys from 50 to 80, or more, children every week in this city, in the summer months. On the first appearance of any looseness of the bowels, the teeth should be carefully looked to, and the gums lanced, if necessary. If there be evidence of indigestible food in the intestine, a laxative of castor oil or rhubarb may be given. After this has acted, the remedies to be employed are astringents and sometimes opiates. The common chalk mixture answers very well in many cases, in the dose of one or two teaspoonfuls, repeated as often as required. I am in the habit of adding to this one-fourth part of tincture of kino, which increases its astringency, and also keeps it from turning sour in hot weather. The dose is the same. If the diarrhœa be not checked by this mixture, one drop of laudanum may be added to a dose of it, but not oftener than three times a day, in children under 2 years old. Diarrhœa is most apt to attack children who are brought up on the bottle; hence, if the case be urgent and do not yield to treatment, a wet nurse should be procured if possible. When this cannot be done, I would strongly recommend the method of preparing the milk with arrow-root and gelatine, which is to be found in the treatise on Diseases of Children, by Drs. Meigs and Pepper, and which Dr. Charles P. Putnam speaks so favorably of in his valuable and interesting article on *Artificial Food for Young Infants,* which was printed in the *Boston Medical and Surgical Journal* for Aug. 1st, 1872. Recollect that these young subjects run down rapidly, and that the treatment and diet must both be of a sustaining character. There is nothing which seems to be so useful to a teething child exhausted by diarrhœa as brandy, which should be given once in three or four hours, or oftener in urgent cases. The dose is from five to twenty-five drops ordinarily—but if there be much prostration you need not fear to increase the amount. It is best given in milk.

Wine-whey suits many children admirably when they are suffering from diarrhœa. It should be diluted about one-half for infants, and may be given in large quantities instead of the ordinary diet. You will often be asked how to make it; the proportions are, a wineglassful of sherry wine to a tumblerful of milk; heat the milk, and just as it begins to boil, pour in the wine. In a few minutes the curd separates and the whey may be strained off. It should be sweetened.

You must not suppose that either convulsions or diarrhœa are inevitable during dentition. With healthy children who are nursed they are exceptional. But it is rarely that even healthy children escape without some indisposition while cutting their teeth. In most cases, this amounts only to fretfulness, wakefulness, loss of appetite, slight delirium, &c. Occasionally, I have seen a child lie in a state approaching to stupor for several days, without any other symptom, its condition being evidently due to the process of dentition. There are cases of genuine, though slight, traumatic fever. They usually require no treatment beyond shelter from noise and light, a somewhat restricted diet, and bromide of potass. or small doses of Dover's powder (one to two grains) at night, with plenty of water to drink.

Population of the Globe.—There are on the globe 1,288,000,000 souls, of which 360,000,000 are Caucasians; 522,000,000 are Mongolians; 190,000,000 are Ethiopians; 176,000,000 are Malayans; 1,000,000 are Indo-Americans. There are 8,642 languages spoken, and 1,000 religions. The yearly mortality of the globe is 42,043,000 persons. This is at the rate of 115,200 per day, 4,800 per hour, 80 per minute. Among 10,000 persons, one arrives at the age of 100; one in 500 attains the age of 80; one in a hundred to the age of 70. In 100 persons, 95 marry.—*Med. Record.*

Progress in Medicine.

REPORT ON MEDICAL CHEMISTRY.

By Edward S. Wood, M.D.

The present being the first of the series of reports on Medical Chemistry, no attempt will be made to confine it strictly to those improvements and discoveries made within the last six months, but new tests and new methods of analysis which have been practised for a longer time will be mentioned, if they are considered of sufficient importance. It may be necessary, too, in the following report, to refer frequently to tests which have been long familiar to chemists, and the fact that they have escaped from the mind of the busy practitioner will be my apology for recalling by a brief description the methods for the performance of some of the most common and important of them.

Detection of Blood Stains.—*Fres. Zeitsch. f. Anal. Chem.* (1872, ii. p. 244) contains a note from Dr. Helwig, contradicting a statement made in the *Chem. Centralbl.*, 1871, p. 37, that a solution of blood pigment in iodide of potassium cannot be used for the production of blood crystals, but only for spectroscopic examinations. It has long been known that a solution of iodide of potassium will extract from clothing the slightest trace of blood coloring matter, it being possible to obtain a solution suitable for testing even when the clothing has been washed, and the stain is very old. In the present instance Dr. Helwig exhibited a specimen of hæmin crystals, which he had obtained by treating a piece of linen upon which a bloodstain had existed for sixteen years, with a solution of iodide of potassium. The residue left after the evaporation of one drop upon a glass side, gave beautiful hæmin crystals upon the application of Teichmann's test, when the remainder of the solution, examined by the spectroscope, gave an absolutely negative result.

Teichmann's test, the ordinary test for hæmin crystals, is performed by rubbing upon the dried residue in a watch glass or on a microscope slide a very small quantity of ammonic chloride or common salt, adding to the mixture a drop of glacial acetic acid, and warming until bubbles form under the covering glass, showing that the boiling point of the acetic acid has been reached. Upon cooling, crystals of hæmin can be detected by the microscope.

In the same journal (1872, i. p. 29) we find mentioned by H. Struve an additional test for blood pigment, which is applicable to the testing of both urine and clothing stains for blood. This test is based upon the precipitation of hæmatin from an acetic acid solution by tannic acid as tannate of hæmatin, and may be performed in the following way. To the urine or any other liquid suspected to contain hæmatin is added a little ammonia water or potassic hydrate, then a solution of tannic acid, and finally acetic acid, to distinctly acid reaction. If hæmatin be present, a reddish-brown precipitate, tannate of hæmatin, is formed, which quickly settles and can be very easily washed and collected on a filter. This precipitate, after drying, gives a residue with which we can obtain hæmin crystals by performing Teichmann's test. This test is far superior to Heller's test for blood in the urine, in which the hæmatin is mechanically carried down with the earthy phosphates, after the addition of ammonic or potassic hydrate. By the above method the author claims to have detected the presence of blood when all other reactions have failed; for instance, in urine when he could not detect the albumen by any of the ordinary tests. In 20 cc. of urine to which 0·023 per cent. of blood was added, a precipitate was obtained which permitted numerous examinations for hæmin crystals to be made by Teichmann's test.

The same author (*Fres. Zeit.*, 1872, ii. p. 150) states that he has separated from the blood two new coloring matters. One is soluble in alcohol and water, difficultly soluble in ether, and forms, when dry, a dark greenish-brown mass which chars without puffing up, and after ignition leaves a residue consisting of oxide of iron, phosphoric acid and silica. It is precipitated from its solution in water by acids, and the application of Teichmann's test does not yield hæmin crystals. The other pigment separates in the form of dark bluish-black microscopic crystals, reminding one of indigo. These crystals are insoluble in water, alcohol, ether, chloroform and acids, but are soluble in alkalies with the production of a dark-brown solution. If precipitated from the alkaline solution by acetic acid, and the precipitate subjected to Teichmann's test, the result is the most beautiful hæmin crystals. Concentrated sulphuric and nitric acids dissolve this pigment with a greenish-yellow color, concentrated hydrochloric acid and aqua regia decompose it, and glacial acetic acid is without action upon it unless ammonic chloride has been previously added, in which case it dissolves it, forming a dark-brown solution, which upon evaporation yields large pure hæmin crystals. After ignition the residue consists of pure oxide of iron. These crystals he considers to be identical with Virchow's hæmatoidin. An elementary analysis of these pigments is promised.

Conversion of Bilirubin into Urinary Coloring Matter. Richard Maly (*Annal d. Chem. und Pharm.*, 1872, vii.) has succeeded in transforming the principal biliary pigment, bilirubin (Cholepyrrhin) $C_{16}\ H_{18}\ N_2\ O_3$, by means of nascent hydrogen, into another pigment termed by him hydrobilirubin, which exhibits the same properties as one of the coloring matters of the urine described by Jaffé (*Virchow's Archiv.* Bd. xlvii. p. 405) under the name of urobilin, and is, without doubt, identical with it.

If sodium amalgam be added to an alkaline solution of bilirubin, or to water in which the bilirubin is suspended, the nascent hydrogen, produced by the decomposition of the water by the sodium, changes the bilirubin into a pigment, the larger portion of which is precipitated by hydrochloric or acetic acids as a dark red flocculent precipitate, which has no longer the chemical properties of bilirubin, except that it is soluble in the alkalies and precipitated by the acids. It is not entirely precipitated by acids, a portion remaining in solution, and imparting to the liquid a garnet or a rose-red color, according to the degree of concentration. It is a reddish-brown, uncrystallizable body, appearing when in thick layers green by reflected light. It is but slightly soluble in pure water, and easily soluble in alcohol, chloroform, alkalies, alkaline carbonates, and the phosphate and glycocholate of sodium, the solution in chloroform having a yellowish-red color, and the alkaline solutions being brown when concentrated and amber yellow when dilute. It is precipitated by the salts of zinc as a dark-red flocculent precipitate, soluble in ammonia. If an alcoholic or alkaline solution is diluted to such an extent as not to be precipitated by acids, and hydrychloric or acetic acid is added until the reaction is acid, or until the solution loses its yellow color and becomes reddish or rose-colored; a layer of the solution, $\frac{1}{4}$ to $\frac{3}{4}$ of an inch in thickness, placed before the spectroscope, shows a well-defined absorption band between the Fraunhofer lines b and F. If the solution is concentrated the entire violet end of the spectrum is dark. If this solution is now made alkaline, an absorption band is still shown between b and F, but nearer b than before. Ammoniacal solutions of this pigment show a beautiful green fluorescence, especially after the addition of chloride of zinc. This fluorescence is destroyed by acids, but made to reappear by the addition of ammonic hydrate.

All of these properties are identical with the coloring matter obtained by Jaffé in small quantities from normal urine, and in much larger quantities from high-colored urines by precipitating the urine, after the addition of ammonic hydrate and filtering, by chloride of zinc, washing the precipitate obtained with water and alchohol, drying, dissolving the precipitate in ammonic hydrate, precipitating this colored solution with acetate of lead, and decomposing the lead precipitate with alcohol which contains sulphuric acid. After filtering from the sulphate of lead formed, an acid alcoholic solution is obtained which exhibits all of the reactions of hydrobilirubin: namely, the change of color upon the addition of an alkali from a garnet-red or rose color to a yellowish or finally to a greenish tinge, which change can also be seen by adding an alkali to high-colored urine; the characteristic absorption band between b and F, which can also be seen by examining high-colored urine with the spectroscope, often not before diluting it considerably; and the fluorescence of the ammoniacal solution, especially marked after the addition of chloride of zinc.

This conversion of bilirubin into hydrobilirubin (or urobilin) takes place within the body by the action of the same agent which was used by Maly in his experiments: namely, nascent hydrogen. According to Magendie and Chevreul, free hydrogen gas constitutes 50 to 55 per cent. of the entire volume of gas in the small intestine, the amount varying largely, however, with the diet. The bilirubin being poured into the intestine with the bile, and meeting with nascent hydrogen in its course to the colon, is converted into hydrobilirubin, which is absorbed into the blood and is eliminated by the kidneys. As a proof of this we have the fact that hydrobilirubin has been found in the coloring matters obtained from the small intestine (Messrs. Vaulair and Masius, *Centralbl. f. d. Med. Wissensch.*, 1871, No. 24), and also in oxen's blood on its way from the intestine to the kidneys. Maly considers Thudicum's "urochrom" and Scherer's "urinary coloring matter" to be impure hydrobilirubin. Nascent hydrogen has exactly the same effect upon biliverdin as upon bilirubin, hydrobilirubin being produced.

Test for Indican (Uroxanthin) in the Urine. (Stockvis, *Fres. Zeit.*, 1872, i. p. 112.) By heating the urine with double its volume of common nitric acid to 60° or 70° C. and shaking with chloroform or ether, the latter re-agents are quickly colored violet blue if indican is present, on account of dissolving the indigo blue (uroglaucin) formed by the decomposition of the indican. The ether or chloroform solutions can then, if desirable, be examined by the spectroscope, and show the absorption band between the Fraunhofer lines C and D. The depth of color of the chloroform solution can be made a relative test for the amount of indican present, as well as in Heller's uroxanthin test; Heller's test is, however, preferable.

Modified Pettenkofer's Test for detecting the Presence of Biliary Acids in the Urine. (G. Strasburg, *Archiv. d. Physiol.*, Bd. iv. p. 461.) This test is applied in the following way: The urine to be tested is mixed with a dilute solution of cane sugar, and a piece of filter paper is moistened with the mixture and dried. After drying, a drop of pure concentrated sulphuric acid is allowed to flow over the paper, when a beautiful purple color will be produced if the slightest trace of biliary acids be present.

This is much more delicate than the ordinary method of performing Pettenkofer's test, in which the sulphuric acid is added directly to the mixture of urine and sugar. The author states that he has detected by this method the presence of biliary acids in a solution containing only 0.00003 gramme (0.00046 grain), and the writer has repeatedly detected them in a liquid by the modified test, when the ordinary test gave a negative result.

Xanthin in Urinary Calculi.—G. Lebon (*Compt. Rend.*, vol. 73, p. 47) describes an interesting calculus which was composed of an external layer of phosphate of calcium and triple phosphate, a middle layer of oxalate of calcium, and a nucleus, which formed the principal portion of the calculus, of xanthin and a small amount of urate of calcium. This portion was of a cinnamon-brown color, assumed a waxy appearance on rubbing, and the hydrochloric acid solution gave on slow evaporation crystals of chloride of xanthin. It also responded to the murexide test.

Xanthin when pure does not react to the murexide test; that is, when it is gently evaporated with a drop of dilute nitric acid, and the residue is exposed to ammonia fumes or moistened with ammonic hydrate, a purple color is not produced. If, however, the residue be treated with potassic hydrate and warmed, a purple color results, while the purple color produced by treating uric acid or a urate in the same way disappears on warming. When xanthin is mixed with uric acid, the color produced by performing the murexide test (nitric acid and ammonia) may lead one to overlook the presence of xanthin unless the precaution is taken to test with potassic hydrate and heat, and M. Lebon thinks that xanthin is considered a rare constituent of calculi, on account of the habitual neglect of this differential test.

On the Efficacy of the Methods used up to the present time for detecting small quantities of Sugar in the Urine.—J. Seegen (*Fres. Zeit.*, x. p. 501) from many experiments draws the following conclusions in regard to the sugar tests: 1, That we have no re-agent which will with absolute certainty, and with the exclusion of other substances which act in an analogous manner and which may at the same time exist in the urine, detect very small amounts of sugar in the urine. 2, That therefore all statements as to the presence of very small quantities of sugar in the urine in many physiological and pathological circumstances, are somewhat doubtful. 3, That normal urine does not contain such an amount that its presence can be detected with certainty. 4, That normal urine contains a small quantity of reducing substances, but that a portion of these is sugar, is not surely determined.

Very careful experiments by Maly (*Fres. Zeit.*, x. p. 382) have been performed to test the delicacy of the best and most common of these tests, viz., Trommer's test, by adding to normal urine different amounts of pure grape sugar. He found that urine to which $\frac{1}{10}$ per cent. of sugar was added, underwent no change upon the addition of potassic hydrate, sulphate of copper, and heating the mixture, except a change to the normal yellow color, and a precipitation of the earthy phosphates after the addition of the first re-agent. Urine to which $\frac{6}{10}$ per cent. of sugar was added, upon being subjected to the same treatment, changed to a brownish yellow color, but no precipitation of the cuprous oxide took place. Upon the addition of $\frac{8}{10}$ to 1 per cent. of sugar, however, the precipitation of the yellow cuprous oxide (suboxide of copper) was produced. The delicacy of the test is shown by the fact that pure water containing $\frac{2}{100}$ per cent. of sugar, gave, when treated in the above manner, a precipitate of cuprous oxide. Hence there must be substances in normal urine which hold in solution the cuprous oxide formed. This action is due mainly to the presence of kreatinine, 28 milligrammes of which were found to be sufficient to retain in solution the cuprous oxide formed by the action of 10 milligrammes of sugar on sulphate of copper; it is also due partly to the presence of the coloring matters, since a smaller quantity of sugar could be detected after decolorizing the urine with animal charcoal than before.

If to the hot fluid which contains cuprous oxide in solution after the performance of Trommer's test, a little zinc oxide be added from the point of a knife, and the fluid be warmed again for a moment, a yellow layer consisting of a mixture of zinc and cuprous oxides will be deposited upon the white zinc oxide in the bottom of the test tube, the zinc oxide having displaced a portion of the cuprous oxide from the solution.

In conclusion, the advice is given, that in those cases in which there is a doubt as to the presence of sugar after the performance of Trommer's test, the urine should first be decolorized with animal charcoal, then made alkaline by the addition of an equal volume of sodic or potassic hydrate, and finally sulphate of copper added until a small quantity of the greenish-blue hydrate of copper remains undissolved upon shaking. If, after heating, no cuprous acid is precipitated, add zinc oxide as mentioned above, and then if no yellow layer is deposited after subsidence of the solids, the conclusion may safely be drawn, that no appreciable amount of sugar was present in the specimen under examination.

(To be continued.)

IRON IN THE BLOOD.—Boussingault finds the amount of metallic iron in aliments as follows:—The minimum in carrots, 0·0009 gram.; the maximum in the blood of hogs, 0·0534; in beer, ·0040. In vertebrates, the quantity of iron does not exceed a thousandth of the weight; in invertebrates, probably not four ten-thousandths. It is usual to attribute the red color of the blood to the presence of iron. Yet the white blood of invertebrates contains almost as much iron as the red of vertebrates. Also, plants, not green, like mushrooms, contain almost as much iron as the green plants. Boussingault concludes that of all substances the blood is that which contains the largest amount of iron, and of assimilable iron, since it has already been assimilated.—*Medical Press and Circular.*

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, JANUARY 2, 1873.

IN this first issue of the year the JOURNAL once more appears in a new form. Among the more obvious changes is the return to the old plan of single columns, which has been adopted as offering, it is thought, certain advantages over the double column now in use for a number of years. But a much more important change has been effected than that of mere dress, one indeed, which for several months has been quietly in operation, and with what success the observant reader has already had some opportunity of judging.

Since 1828 this has been always the first and for most of the time the only Medical Journal of New England; yet it cannot be denied that it does not compare as favorably as could be wished with some of those of other cities. Absence of competition at home may explain in a great measure the want of active interest on the part of the profession, and the greatest credit is due to previous editors that they have, as it were, single handed kept the JOURNAL so long such as it is. There is good reason to hope that brighter days are at hand.

The change to which we have referred is in the management of the JOURNAL. As will be seen by the announcement, it has passed into the hands of a number of public spirited gentlemen, who are giving their time and money to the development of the very large resources which the leading paper of a well educated medical community like ours ought to have at its command. In addition to the very valuable aid which has been and will continue to be rendered by the board of management itself, it has been thought expedient to enlarge the editorial staff, and to attach to it a corps of editorial reporters, thereby materially increasing its working power and efficiency. The reports on the progress of medicine have met with such success during the past three months as to encourage their continuance, and we feel justified in the hope that the value of the JOURNAL will thereby be materially increased. It is proposed to publish from time to time clinical lectures given by some of our most prominent teachers, on subjects both interesting and instructive to the general reader. Particular attention will also be paid to the department of reviews, one of the important characteristics, we think, of a good medical journal. While giving such a space to the department of medical science as our modern education demands, we shall not forget that good practical articles are of equal importance.

We are happy to take the opportunity to reply to a correspondent, who, wishing us success, asks: "Can it not be made the organ of the profession in dealing with the public on questions which interest both, speaking out plainly and promptly, and thus giving the doctors some influence in the world's affairs?" As a rule the space hitherto reserved for editorial articles will be given up to the constantly increasing demands of other departments, but when questions arise touching the honor of the profession or the sanitary interests of the community, the JOURNAL will freely accept the responsibility which its position entails. This JOURNAL should hold a position second to none in America, and we call upon all its well-wishers to aid us to gain it.

A RETURN TO THE OLD FORM OF PAGE is not the only improvement inaugurated in the present number of the JOURNAL. Our readers will be pleased to notice the substitution of a delicate tinted paper for the white sheet heretofore serving to convey our impressions. *The British Medical Journal*, the *London Ophthalmic Hospital Reports* and other publications of note are printed on similar paper, and it is commended by the English and other oculists as having been found less fatiguing to the eyes, especially by artificial light, than any other color.

As the readers of the JOURNAL know, it has long been customary to publish in its columns the reports of deaths from chloroform in order to induce the world at large to give a fair trial to ether, from the use of which death need never occur. The work has prospered, and in spite of ignorance and misrepresentation, ether is now superseding chloroform in many places where but a few years ago it would have been scoffed at. Although we have many more reports of deaths from chloroform on hand, we propose now to drop the subject. The merits of ether and the dangers of chloroform are now too prominent to be treated with contempt; let those who use the latter account for it to their consciences and to coroners as best they can.

THE BURNING OF THE SMALLPOX HOSPITAL, which happily was not yet occupied, is not so great a calamity as might at first be supposed. We understand that the building was not a suitable one, and that the situation is very unhealthy. One of our most eminent physicians, who visited the hospital a few days before the fire, expressed to us the opinion that such patients as should escape poisoning from the effluvia of several drains which open near its marshy grounds would be likely to be roasted in case of fire should they have the misfortune to lie in the upper story. A new one-story building is to be erected, it is said, in eleven days, and we are glad to see that work was begun as early as last Sunday. The form of the building is, we think, an improvement, but in size it is totally inadequate to meet the emergency, and the situation is the same as before. We should like to know what medical man has been consulted in this matter, and why, many weeks ago, a sufficient number of field hospitals, on the army plan, were not put up in healthy places, and a sufficient force of watchmen detailed to make incendiarism impossible.

VACCINATION AND RE-VACCINATION.—Dr. Oscar Eyselein, of Augsburg, furnishes a most exhaustive article on this subject, appearing in the *Medicinische Jahrbucher* (Jahrgang, 1872, iii. Heft). He gives a complete history of the introduction of vaccination into each of the European states, with a careful analysis of the bills of mortality before and after its general adoption. While the extreme length of this article forbids our attempting any abridgement of it, there are several branches of this subject which possess especial interest at the present time, and some of his views on these topics are, therefore, transferred to these columns.

The writer considers it as an established fact that a proper vaccination in infancy gives, in general, immunity against the smallpox with certainty until the fifteenth year, in rare instances for a life-time. From the age of fifteen, the susceptibility to the disease is, as a rule, renewed, sooner or later, according to the peculiarities of the individual. It is, therefore, important that when this age is attained, an attempt at re-vaccination should be made, and this attempt, if unsatisfactory, should be repeated from time to time until successful. A successful re-vaccination is generally regarded as giving partial or complete immunity against the contagion of smallpox, yet we are by no means justified in assuming that even this immunity lasts for a life-time. Inasmuch, therefore, as it has not yet been determined by actual observation just how long a period of protection is afforded by re-vaccination, it is wise, in persons who have attained the age of fifteen, to repeat the attempt at re-vaccination every fifth year, more especially as it is found that after the thirtieth year, the frequency and fatality of the disease increases in direct proportion to the number of years that have elapsed since the previous vaccination. When an individual who has not been re-vaccinated for a number of years is attacked with the smallpox (and this applies, in exceptional cases, to those with whom considerable time has elapsed since their primary vaccination), in times when no epidemic is prevailing, the disease assumes a modified form (varioloid). But in times of general smallpox epidemics, the susceptibility to the effects of the virus is found to be increased, especially where a considerable period has elapsed since vaccination or re-vaccination, so that the disease appears with all its unmodified and malignant symptoms.

Inasmuch as experience has shown that the single occurrence of *variola vera* does not give absolute immunity against a second attack (a second attack is apt to be even more dangerous and oftentimes fatal), it should not be regarded as surprising, especially during the prevalence of a general epidemic, if this malady is, in exceptional cases, contracted by individuals who have been, within a longer or shorter time, vaccinated or re-vaccinated. In case of the latter, however, the liability to the disease is very much smaller, and the type milder, than in case of those who have already once been affected with the genuine smallpox.

Dr. Eyselein shows that as early as the year 1818, the idea began to gain ground that the humanized virus then employed was losing its efficacy, and recounts the efforts made to improve the quality of the virus. This was first attempted by transferring the humanized lymph to the cow, and then employing for vaccination the lymph derived from the animal (retro-vaccination). Lymph from this source was employed in Wurtemburg from the year 1818 to 1825, when attention began to be attracted to cases of cow-pox occurring spontaneously, and liberal premiums were offered to all owners of cattle affected with this disease who should bring forward their animals. The lymph derived from this source was found to be especially protective, and has, therefore, been employed since that time by that government. In Bavaria, animal virus was introduced in 1838, and means have been adopted to forward a fresh supply from the central bureau to the public vaccinators, at least once each year.

The frequent failure to obtain any result after inoculations with the animal virus is accounted for by the fact that we possess no means of distinguishing the active lymph contained in the vesicles, which are formed upon the cow, from the serum which continues to flow after the contents of the vesicles has been evacuated. Hence it happens that the vaccinator is often furnished with points or quills which have been charged with simple serum, and these, when employed for the purpose of vaccination, naturally produce a negative result. It has been urged as another objection to the use of animal virus, that the constitutional symptoms induced are often too severe. The obvious reply to this allegation is that if the virus derived from this source gives evidence of greater activity, we are thereby assured of a thorough and satisfactory inoculation, of which fact we are by no means certain when degenerate or long humanized lymph has been employed. These trivial objections, however, so far from affording any valid argument against the use of the animal virus, are really entitled to no weight, inasmuch as they are not at all applicable to humanized lymph, one or more removes from the cow. As to the transmission of other diseases by means of vaccination, an objection always to be found in the mouths of the anti-vaccination agitators, this, in the case of *scrofula* and *tuberculosis*, is of very questionable occurrence, while, as regards *syphilis*, it has been reported in a very limited number of cases. There can be no possibility of the inoculation of any other disease, provided the simple precaution is taken of never employing lymph that is tinged in the slightest degree with blood.

It is only in the most exceptional cases that the constitutional symptoms induced by vaccination assume a severe or dangerous form, and it is doubtful if there is a case on record where death can be justly ascribed to the direct result of vaccination. In Wurtemburg, during a period of five years, there were recorded 208,322 vaccinations of children, and of these the only one resulting fatally was complicated with erysipelas and gangrene. Dr. Eyselein agrees with other recent writers in strongly condemning the use of lymph taken from revaccinations. According to Müller (*Berlin Klin. Woch.*, No. 28, 1871), lymph derived from this source is not identical with that obtained from primary vaccinations, but, on the contrary, is found to deteriorate with each remove, until it becomes absolutely worthless, thus leading to imperfect or spurious vaccinations.

Medical Miscellany.

THE change in the shape of the JOURNAL has occasioned some little delay in issuing the present number, and some of the arrangements with regard to paper and type are not yet fully completed.

POISONOUS PAPER SHADES. Dr. Mirus mentions two cases in Jena and one in Frankfort where persons using green glazed paper shades were attacked with symptoms of arsenic poisoning. In one case the symptoms did not cease until the use of the shade was discontinued. The heat of the lamp, volatilizing the arsenic, renders even the very small quantity present extremely dangerous. The arsenic is used in the well-known Paris green, with which not only lamp shades, but wall papers, &c., are so often colored.

ROBERT L. PACKARD has been chosen Assistant Professor of applied Chemistry in Bowdoin College.

EXTIRPATION OF THE LACHRYMAL GLAND was lately resorted to in Germany, in a case of excessive and harassing lachrymation. The relief was complete, and the eye continued moist without the gland!

PROTECTION AGAINST SMALLPOX.—A CONVERSATION.
First Year Medical Student. "What are these carbolic amulets good for?"
Third Year Student. "For the apothecaries!"

THE HOPKINS HOSPITAL, about to be built in Baltimore, for colored people, has a foundation of two millions of dollars, the bequest of the late Gerard Hopkins.

INFLUENCE OF OCCUPATION ON INCREASE OF POPULATION.—Dr. Lagneau, of the French Academy (*Gaz. Hebdomadaire*), after a searching investigation, declares that the relinquishment of country for city life involves a decided physiological decrease of population, while the abandonment of agriculture for the liberal, industrial and commercial professions leads to a diminution of births which varies according to the profession.

A YOUNG man, who has failed thus far in all ways of getting a living, advertises in a Cincinnati paper, that for a reasonable compensation he will submit himself to experimental operations at the hands of physicians and surgeons. Why didn't Prof. West know about him?

THE GENTLE BREEDING OF BOOKS.—Richard de Bury, a Bishop of Durham, in England, in the time of Henry IV., thus quaintly discourses of books: "They are the masters" (he says) "who instruct us without rods, without hard words and anger, without clothes and money. If you approach them, they are not asleep; if investigating, you interrogate them, they conceal nothing; if you mistake them, they never grumble; if you are ignorant, they cannot laugh at you."

THE Royal Institute of Science, Literature and Arts, in Venice, offers a medal of the value of 3000 francs, to be awarded in 1874, to the best essay on the following subject :—" The advantages derived by the medical sciences, especially physiology and pathology, from modern discoveries in physics and chemistry ; with a retrospective view of the systems which prevailed in medicine in past times." The competition is open to foreigners, and the essays may be written in French.—*Nation*, Nov. 21, 1872.

JENNER.—One of the first sculptors of Rome is engaged on a work of great interest to the Profession and the public. Monteverdi, whose wonderful success in the statues of the genius of Franklin and the youth of Christopher Columbus, is now at work on a companion statue that is worthy of its predecessor. Its subject is the genius of Jenner.

A GOOD EXAMPLE.—A few weeks since the Reverend Canon Charles Kingsley, in his presidential address to the Birmingham Midland Institute, recommended with great earnestness and eloquence the teaching of art, and also the encouragement of the practice of preserving health. The Birmingham papers announce that this good advice has been followed by an anonymous benefactor investing £2,500 to establish a professorship on that subject

DR. SPAETH was formally installed Rector of the University of Vienna on the 18th of November.

MARRIED,—At Boston Highlands, 26th ult., Dr. Edward S. Wood, of Cambridge, to Miss Irene Eldridge Hills. [No cards.]

BOOKS RECEIVED.—Obstetric Aphorisms, for the use of Students commencing Midwifery Practice. By Joseph G. Swayne, M.D., Physician Accoucheur to the British General Hospital, &c. Second American Edition. Philadelphia: H. C. Lea. 1873. Pp. 189. (From A. Williams & Co.)—Clinical Lectures on Diseases peculiar to Women. By L. Atthill, M.D., Vice President Dublin Obstetrical Society, &c. Second Edition. Philadelphia: Lindsay & Blakiston. 1873. Pp. 241. (From A. Williams & Co.)—Fœticide, or criminal Abortion; a Lecture. By Hugh L. Hodge, M.D. Fourth Edition. Philadelphia: Lindsay & Blakiston. 1872. Pp. 55. (From A. Williams & Co.)—The Expression of the Emotions in Man and Animals. By Charles Darwin, M.A., F.R.S., &c. New York: D. Appleton & Co. 1873. Pp. 374. (From A. Williams & Co.)

PAMPHLETS.—The Dangers of Chloroform, and the Safety and Efficiency of Ether, as an Agent in securing the avoidance of Pain in Surgical Operations. By J. Morgan, M.D., F.R.C.S , &c. London: 1872. Pp. 45.—Eighth Annual Catalogue of the Officers and Students of the Institute of Technology. Boston: 1872. Pp. 75.

Deaths in fourteen Cities and Towns in Massachusetts, for the week ending Dec. 21, 1872.

Boston, 196—Charlestown, 10—Worcester, 23—Lowell, 17—Milford, 2—Salem, 7—Lawrence, 18—Springfield, 4—Lynn, 13—Gloucester, 3—Fitchburg, 2—Newburyport, 4—Somerville, 4—Haverhill, 5. Total, 308.

Prevalent Diseases.—Smallpox, 81—consumption, 44—pneumonia, 19—typhoid fever, 12—scarlet fever, 10.

The deaths from smallpox were as follows: Sixty-nine in Boston, four in Lawrence, three in Charlestown, two in Newburyport, one in Worcester, one in Somerville and one in Haverhill.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, December 28th, 167. Males, 85; females, 82. Accident, 5—apoplexy, 2—inflammation of the bowels, 1—disease of brain, 7—bronchitis, 4—consumption, 17—convulsions, 2—croup, 6—cyanosis, 2—debility, 1—diarrhœa, 1—dropsy, 1—dropsy of the brain, 1—scarlet fever, 6—typhoid fever, 3—gastritis, 2—disease of heart, 6—disease of kidneys, 1—disease of liver, 1—laryngitis, 2—congestion of lungs, 2—inflammation of lungs, 15—marasmus, 1—measles, 1—mortification, 1—old age, 4—paralysis, 2—pleurisy, 1—premature birth, 2—peritonitis, 1—puerperal disease, 1—smallpox, 63—unknown, 2.

Under 5 years of age, 57—between 5 and 20 years, 24—between 20 and 40 years. 53—between 40 and 60 years, 15—over 60 years, 18. Born in the United States, 102—Ireland, 36—other places, 29.

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HÆMORRHAGIC SMALLPOX.

By Edward Wigglesworth, Jr., A.M., M.D., Harv.

Read before the Suffolk Dist. Med. Society, Dec. 28th, 1872.

Since 907 A.D., when Elfrida, daughter of Alfred, king of England, recovered from an attack of variola, then first so called, individual cases of smallpox have been always present in the world, and these single scattered cases are not usually at present very severe. Previous to the introduction of vaccination, however, these cases presented themselves as a universal and chronic epidemic, and Alexander Crichton, imperial physician in Russia in 1768, reported that up to that year every seventh child died annually from smallpox (*Moore's Hist. of Smallpox,* p. 286). With such a general average as this, a relative epidemic occasioned fearful ravages, and we find accordingly two million deaths in one year in Russia alone (Woodville, *Smallpox,* p. 292).

Even at present, at different times, over a greater or less extent of country, from unknown causes, the intensity of the poison, or the receptivity of mankind for the virus, or both, appears to be increased, and the result is an epidemic of the disease. These epidemics are more common in the warm months, but may appear at any season, During the prevalence of an epidemic of variola, individual cases tend to assume a graver type than usual, and we see specimens of the perconfluent, corymbose and hæmorrhagic varieties. The epidemic at present existing has been especially characterized by the occurrence of a relatively disproportionate number of cases of the most severe form of variola, the hæmorrhagic, so that many, even old physicians, have now encountered this variety for the first time. Nor only with us. For over a year the European journals have teemed with reports of such cases. Dr. Lothar Meyer (*Bericht an die Königl. Sanitäts Comission*) reports from Jan. 1st to July 20th, 1870, 8 cases of variola hæmorrhagica among 287 cases of smallpox in Berlin; and from Aug. 10th to Dec. 31st, 1871, 111 such cases among 1293 of smallpox (*Deutsche Klinik,* No. 44, 1872). In Trinidad, where the epidemic has raged since May, 1871, Dr. Bakewell reports his smallpox hospital at Port of Spain, as frequently full of confluent and hæmorrhagic cases. The males of mixed Spanish and Indian blood, imperfectly vaccinated or unvaccinated, all died, without exception, from such attacks of the severest kind (*Med. Times and Gazette*, vol. ii. No. 1162, Oct. 5th, 1872). The question then presents itself, what is hæmorrhagic smallpox, and why is it with justice so called?

We are all familiar with the appearance of pocks, the contents of which are stained red or even black by the admixture of blood. To these should be applied the term variolæ cruentæ. This form is not true variola hæmorrhagica, though variola nigra is the name frequently applied to it. Such pustules are most common on the plantar and volar aspects of the feet and hands. There is no general affection of the capillaries and no consequent general extravasation of the blood. The process is one of local inflammation. Nor must we confound with variola hæmorrhagica the frequent ecchymotic prodromal forms occurring especially upon the abdomen, more often met with in women than in men, and consisting of purpuric spots often accompanied by an abundant eruption of petechiæ, and fading by the fourth day to a dirty yellow color (*Prag. Vierteljahrsch't*, xxi. 1872). Often, especially in old age, and particularly upon the lower extremities, we may notice hæmorrhagic efflorescences, and at the same time there may be present slight hæmaturia, epistaxis and ecchymosis of the conjunctivæ, but the disease runs otherwise its normal course. So too, in the stage of desiccation, pustules may encroach upon each other and join to form large bullæ, which fill themselves often with fluid blood. These various appearances do not portray true variola hæmorrhagica. Now let us see what this really is.

History.—Our acquaintance with the subject of this paper may be considered as dating from Sydenham's account of the intermittent epidemic of smallpox in London, from 1667 to 1681, inclusive. He speaks of "an anomalous black smallpox in 1670," and from this year to 1681 the disease increased in severity until in the latter year there occurred a species which he calls "pessimæ," in which "purple spots frequently preceded the eruption or were occasionally the harbingers of death, with a discharge resembling blood from the bladder, when little or no eruption had taken place." Sanders, in a work published in 1813, describes a form of sanguineous smallpox, causing death in one or two days, "blood often flowing copiously from the mouth, nose, eyes, or any passage, particularly the kidneys, bladder and uterus." From this latter date the disease smallpox has been admitted to manifest itself at times under the form of variola hæmorrhagica. But it is only recently that this variety has been thoroughly studied histologically as well as clinically.

Varieties.—The hæmorrhagic form of smallpox admits of but two sub-divisions, and these are rather stages of intensity than differences in form. In the first stage the extravasation into the skin and the hæmorrhage from the mucous membranes is so intense that the patient usually dies on the second or third day, before other symptoms can be developed. When the patient lives long enough for the disease to pass into the second stage, true pustules will form and the petechiæ of the first day, which by the second or third day have turned to purple papules, and are most numerous upon the face, lose their blood and become filled with yellow pus, the surrounding skin appearing livid. With regard to clinical appearances we may perhaps admit two varieties, the papular form, broad and flat, but slightly raised above the level of the surface of the skin, colored centrally or peripherally or throughout of a dark red or black color, and possessing a true umbilication or central depression; and secondly, the purpuric form, occurring alone or combined with the papular, not raised, covering almost any extent of surface, and usually of a purplish-red color, though varying from vermilion to coal black.

DEFINITION.—Variola hæmorrhagica may be defined as an intensification of the first stage of smallpox, characterized by the prodromal exanthem to such a degree that death ensues before sufficient time has elapsed for the disease to enter upon its second stage, the integuments, external and internal, being universally affected and so markedly that the distended capillary bloodvessels no longer serve as normal, unbroken channels for the blood.

ETIOLOGY.—Clinically speaking this variety may take its origin by contagion from any variety of variola, as is shown by cases occurring in this city, in Berlin and in Hamburg, where Simon reports a case of variola hæmorrhagica due to contagion arising from variola sine variolis in a sister. Scientifically it is due to an exaggeration of the causes producing the prodromal exanthem, which latter results from a paresis of the vaso-motor nerves of the capillaries in the region affected (*Knecht. Arch. f. Derm. u. Syph. Heft* ii. 1872). This exaggeration is less attributable to strength of attack than to weakness of defence, as variola hæmorrhagica usually occurs only where the patients were unvaccinated (Bucquoy. *Report on Smallpox at Cechin, France)*, though this is doubted by Knecht, and cachectic or suffering from chronic nervous trouble (Aikmann's *Glasgow Med. Jour.*, iv. new ser.), with tissues badly nourished by the debilitated trophical nerves, and capillaries with degenerated walls. Furthermore it is most common between the ages of fifty and sixty years, and more frequent in women than in men. Just so in scarlet fever, the hæmorrhagic form occurs only when the patient is in wretched physical health before the attack (Bohn. *Blutiger Scharlach Jahrb. f. Kinderheilk.* 1869, No. 4). Even in previous conditions of so called health we find, by means of the sphygmograph, in those who subsequently are attacked by the hæmorrhagic form of variola, an abnormal and defective action of the muscles of the vessels. That the nervous and capillary systems are affected by simple variola is shown by the brain symptoms, the occurrence of herpes zoster, and of paralyses (Wolff, *Alg. Zeitsch. f. Psychiatrie*, B. 24–26), and of the concurrence of the menses with the eruption, even when they have apparently ceased forever (Knecht, *loc. cit.*).

Locality.—The seat of variola hæmorrhagica, especially of the papular form, is usually the abdomen, which in common cases of variola often enjoys a certain immunity; then the lower limbs and back. The purpura form prefers, next to the abdomen, the eyelids.

Course, Characters and Symptoms.—The period of *incubation* is the same for variola hæmorrhagica as for the other forms of smallpox. This is well shown by a case of Dr. Meyer's in Berlin, where a woman in the sixth month of pregnancy, who, on account of trouble in her legs, never left the house and saw no company, was infected by her husband who had varioloid, fell sick thirteen days later than he, and showed, after a three days prodromal stage, the purpura form of variola hæmorrhagica. The *prodromal symptoms* may be prolonged, the hæmorrhagic symptoms nevertheless making their appearance and death ensuing before the perfect development of the pocks. Or the prodromal symptoms may run their usual course and the eruption of vesicles appear, accompanied by most severe constitutional symptoms; then, after a day or two, the disease assumes the hæmorrhagic type and the death of the patient may be deferred for several days more. In cases belonging to the first class pain in the back and exhaustion are soon noticed. Then, with usually a moderate fever, there appears a redness affecting preferably the same localities as those of the usual prodromal exanthem, but which may cover the whole body, and which soon takes on a bluish color. The pain in the back is now so severe that sleep is interfered with and narcotics exercise merely a temporary influence. The next day commonly shows the hæmorrhagic appearances, with swollen conjunctivæ and effusions under the choroid membranes, sometimes producing total blindness. Metrorrhagia, epistaxis, hæmaturia, and bloody stools now occur. The pharynx, larynx and hard and soft palates become thickly coated with a diptheritic exudation, dyspnœa sets in, the voice is lost and the breath has a disgusting sour smell. A general extravasation of blood into the tissues and from the mucous membranes now takes place, and soon death ensues, previous to which the pocks often appear as very minute vesicles, but undergo no further development.

In cases of the second class, above mentioned, the initial fever is very severe, not remitting even at the completion of the eruption, the temperature merely sinking somewhat in the morning. After two to eight days of great suffering, especially of the larynx and throat, delirium supervenes, with extravasation of blood into the pocks and the skin generally, and from the mucous membranes, frequently accompanied also by extensive infiltration of the lungs. Death now ensues at about the third or fourth day, the patient being at the time unconscious.

Diagnosis.—Practically, it is not difficult to recognize variola hæmorrhagica, occurring as it does during an epidemic of smallpox, but scientifically it is only by a differential diagnosis, by the careful elimination of several affections which to the eye closely resemble it, that we can arrive at certainty of conviction with regard to its presence. Prodromal exanthems, and the other forms of slightly hæmorrhagic nature already referred to, are first to be eliminated. We must remember the possibility of ecchymoses and extravasations in the other exanthemata, e. g. scarlet fever (Frazer. *Edin. Med. Jour.*, xviii. p. 180, Aug., 1870). The coincidence or succession of various exanthemata must be borne in mind (Fleischman. *Arch. f. Derm. u. Syph.*, iv. 2, p. 223). So the occurrence of other diseases with variola, e. g. typhus fever (Simon. *Berl. Klin. Woch't.*, No. 11, 1872). We must not forget that hæmorrhages occur in other diseases not of an exanthematous nature (Thiry. Scorbut. *Presse Méd.*, xxiv. 35). Variola hæmorrhagica may also vary in minor points at various times and places, according to idiosyncrasies or circumfusa (Cantel. *Bull. de Thér.*, lxxxiii. p. 224) (Rocher. *Gaz. Hebd.*, 2d Ser., ix., 32, p. 523). Finally, we must consider the characteristics peculiar to the disease itself (Foot. Hæmorrhagic Smallpox. *Dubl. Jour.*, liv., July, p. 68).

The diseases most apt to be confounded with the form of smallpox in question are the purpuræ, rheumatic and hæmorrhagic. B t the former, first described by Schönlein as peliosis rheumatica, occurs in the strong and healthy or in those chronically affected with rheumatism, is never found in children or aged persons, is more common in men than women, begins with pains in the joints which subside when the small livid spots appear, and the prognosis is favorable. [Vide Bradbury. Peliosis Rheumatica. *Brit. Med. Jour.*, Sept. 7th, p. 274.] Purpura hæmorrhagica may more readily be mistaken for variola hæmorrhagica, and the purpura febrilis of Willan was probably now one and now the other of these two diseases. Both begin with exhaustion and headache, but in the latter there is pyrexia, and the pulse may go up to 140; in the former, the pyrexia is slight or absent. The prodromal stage of the purpura is more prolonged. The maculæ appear first on the lower extremities, whereas in variola these occur first about the navel and spread over the body. In the former these maculæ may be an inch or more in diameter, with interspersed or scattered petechiæ. In the latter they are petechiæ, changing, on the second or third day, to purple papules. In the former we notice successive crops of maculæ, some fading as others appear, and a vulnerability of the skin such that even a slight pressure produces an ecchymosis. In the latter we find a general cyanosis, due to hæmorrhage into the lungs and consequent impeded respiration. In the former metrorrhagia is rare, in the latter very frequent. In the former, hæmorrhage gives at first a sensation of relief, but the patient dies, finally exhausted by loss of blood, and often with œdema of the feet and ascites. In the latter, death supervenes without such appearances (Hebra. *Hautkrankheiten*, Bd. i. p. 619).

The possible occurrence of appearances not as yet described must not be left out of consideration. Thus, Dr. Bedo Wenzel (Fälle eigenartiger Exantheme. *Arch. f. Derm. u. Syph.*, iv. I., p. 79, 1872) reports three cases of exanthemata varying from typical classified maladies and from each other. In each there was a tendency to hæmorrhagic effusions, referable, the author thinks, to the influence of the smallpox epidemic then ruling, this magnifying other exanthemata as well as predisposing to severity of type in the disease itself. The first case reported resembled rheumatic purpura in its clinical history, but the exanthem consisted of pale red roseolæ, generally with prominent central petechiæ; whereas in rheumatic purpura, the spots formed by extravasated blood are dark red, usually flat, and, when they first appear, show a slight congested halo. Nor was it hæmorrhagic purpura, which begins with exhaustion and fatigue, for the first symptom was marked pyrexia. The second case was one wherein smallpox followed immediately an acute ecthymatous exanthem, this latter immediately succeeding a recovery from scarlet fever. The third case resembled pemphigus, but the bullæ were flat and accompanied by spots and bands, most of which disappeared without changing to bullæ. Some of the bullæ also were filled with blood. There were no relapses and no general symptoms (Neubert. *Schmidt's Jahrb.*, 155, No. 9, 1872).

PROGNOSIS.—Variola hæmorrhagica is almost unexceptionally a fatal disease. A few writers report recoveries after what they have considered as a purely papular form uncombined with purpuric appearances.

TREATMENT.—It follows, from the prognosis, that we can expect but little from treatment. Quinine may be given. So also hæmostatics, as plumbi acetas for internal bleeding, and ergot for metrorrhagia. Stimulants, too, may be administered when collapse is threatening.

PATHOLOGY.—Autopsies, in cases of variola hæmorrhagica, show numerous post-mortem extravasations into the integuments of the body, and the tendency is towards rapid decomposition and putrefaction. Examination of ante-mortem suggillations shows that they penetrate the sub-connective cellular tissue and even the muscles sometimes to the bones. The *brain* may be anæmic or strewn with spots of blood. The vessels of the pia mater are often twisted and crowded with dark blood. Hæmorrhagic pachymeningitis may exist, and even extravasations into the arachnoid. The *trachea* often shows a diphtheritis which may extend downwards to the bronchi or outwards peripherally from the larynx to almost any extent. The serous membranes of the *pleura, pericardium and peritoneum* are covered with purpuric spots. The *lungs* are usually œdematous and hypostatically hyperæmic; in rare cases an extended lobular pneumonia may exist. The *heart* is filled with dark red blood, the endocardium covered with petechiæ, and the muscles sometimes rather fattily degenerated. The *liver* is enlarged, with fatty degeneration of its acini, especially in the purpuric form of variola hæmorrhagica. The *spleen* is often enlarged as in common variola, but in the purely purpuric form is small and tough and contains thrombi. In the papular form the spleen is of about the normal size. The mucous membranes of the *stomach* are covered with extravasations often extending into the intestines.

The *kidneys* are the most frequently and severely affected of all the organs. They may be doubled in size at the expense of the cortical substance, and show all the signs of acute parenchymatous inflammation. Nephritis of both kidneys may exist. A diphtheritis or hæmorrhagic catarrh may cover the whole pelves, and the ureters and bladder may be filled with blood (*Unruh. Blutungen in Nierenbecken u. Ureteren bei pocken. Arch. d. Heilk.* xiii. 4 u. 5, p. 289). A similar hæmorrhagic catarrh of the *uterus* often exists, and the mucous membrane of the large intestine is sometimes so infiltrated that the application of a stream of water to clean it washes it entirely away, leaving the serous layer bare.

HISTOLOGY.—The substance and texture of the tissues and the blood in smallpox have not been neglected by microscopists. Twelve years ago, Auspitz and Basch (*Virchow's Arch., Bd.* xxviii.) described the results of their investigations in this direction, and spoke of the early stage at which the bloodvessels were affected. On the second day of the eruption, the vessels of the corium, both papillary and deeper layers, were enlarged and their walls surrounded by numerous thickly-crowded, small, round cells. This condition of the vessels becomes more marked with the intensity of the disease. Accordingly Pribram (*Viertelj. sch't. f. d. prak. Heilk.*, iii. p. 27) calls attention to the fact that this condition is found magnified in degree in the earlier stages of variola hæmorrhagica. Red blood corpuscles accompanying the loaded capillaries in the deeper layers of the corium next heap themselves up and pervade all the layers of the corium and of the epidermis, at a period earlier than the formation of the white corpuscles going to fill the usual vesicles of variola (Wagner. Epithelial blutungen. *Arch. d. Heilk.* ix. p. 505, 1868). The origin of these red corpuscles may be traced to a thinning of the walls of the capillaries. Erismann also has examined the skin in variola hæmorrhagica (*Sitzungs b. d. Wien. Akad.* 1868), but his views have not stood the test of comparison with the more extended labors of others. So Ebstein, who first called attention to the fan-like partition walls within the variolous vesicles (*Virchow's Arch.* xxxiv.). Prof. Wyss, of Zurich, has made perhaps the most recent extended researches in this direction (*Arch. f. Derm. u. Syph.* 1871, p. 529) (*Centr'b. f. d. Med. Wissensch.* 1872 17–27). As the result of his investigations, he is in accord with Wagner that the blood corpuscles pass through thinned, and not ruptured, capillary walls. He agrees also with Wagner that the blood corpuscles leave their usual capillary paths at the apices of the papillæ of the corium and wander into the upper layers of the rete Malpighii, but he does not thus restrict, like Wagner, the location of their post of emigration. They depart, he says, also, from the capillary meshwork beneath the base of the papillæ and even from the deeper layers of the corium. Here the extravasation is not always continuous, but broken into separate groups of blood corpuscles. More superficially the corpuscles lie so thickly as to touch each other, and a cross section of an ecchymosis extends often two millimetres in depth. Where blood is extravasated into vesicles already formed, it is not confined to one of the compartments, but may pervade all, especially the deeper ones. [Vide also Ponfick. Ueber die anatomischen Veranderungen der inneren organe bei hæmorrhagischen und bei pustulörer Variola. *Berlin Klin. Wochensch.*, ix. 42, p. 508.]

We believe that we have shown, at least, the propriety of the term variola hæmorrhagica. It only remains for us to warn against the use of the term purpura variolosa. No disease should ever be adjectivally christened by the appellation of a distinct morbific process, however similar may be the clinical appearances. Carelessness of this description, added to French verbosity and English hair-splitting, has done too much towards producing confusion in dermatological nomenclature. There is a purpura hæmorrhagica; there is a variola hæmorrhagica, subdivided into papular and macular forms. There is no purpura variolosa, and the term variola purpuraformis is, to say the least, superfluous.

24 *Charles Street*, Dec. 1872.

Progress in Medicine.

REPORT ON MEDICAL CHEMISTRY.

By Edward S. Wood, M.D.

(Concluded from page 18.)

New Reagent for Antimony.—Hugo Tamm, in the *Chem. News,* No. 623, recommends a new reagent for the precipitation of antimony, which promises to be useful, not only in the qualitative and quantitative analysis of this metal, but also in the analysis for its detection in toxicological cases. This reagent is gallic acid, and it can be used not only for the quantitative determination of antimony when alone, but also when in combination with arsenic, tin, or with both together. When a slight excess of gallic acid is added to a neutral, or feebly acid concentrated solution of antimonous chloride (terchloride of antimony), all of the metal is precipitated as the bi-gallate, forming a very white precipitate, which settles readily and can be easily washed with hot water by decantation. The solution of gallic acid used should be freshly prepared, for by standing a few days it becomes so altered as to be unfit for the precipitation of antimony. The solution containing the antimony should also be previously prepared for the addition of the gallic acid by evaporation, in order both to expel all, or nearly all, of the free acid, and to concentrate the solution. The precipitate then formed by the addition of the gallic acid, when washed and dried at 100° C., contains exactly 40·85 per cent. of metallic antimony. This reagent will only separate antimony from its solutions when the latter exists in the form of antimonous or terchloride, solutions of antimonic or perchloride being unfit for the estimation by gallic acid; but we have in iodide of potassium a reagent which very readily reduces the antimonic to the form of antimonous chloride, potassic chloride and free iodine being simultaneously formed, as represented in the following reaction:—$Sb_2\,Cl_5 + 2\,KI = Sb_2\,Cl_3 + 2\,K\,Cl + I\text{-}I$. Gallic acid is especially applicable in estimating the amount of antimony in either the native or the artificial sulphide when the latter is mixed with the other sulphides, as is often the case in the analysis of a liver or stomach in toxicological cases, or even in an ordinary analysis, the sulphide of antimony being obtained mixed with a large amount of free sulphur, or contaminated with the sulphides of arsenic or copper. The method of treating such a precipitate is, to dissolve it in hydrochloric acid with the addition of a little potassic chlorate if necessary, to add to this solution one of iodide of potassium until no more free iodine is formed, which reduces antimonic to antimonous chloride; then to concentrate by evaporation, and to precipitate the antimony with a solution of gallic acid. This precipitate can be washed, dried and weighed, the antimony being thus estimated directly. In the filtrate we have all of the other metals as chlorides. By this method we can easily separate antimony from arsenic, which is very difficult by other processes. The bi-gallate of antimony thus obtained can afterwards be dissolved in hydrochloric acid, and the solution subjected to confirmatory tests if desirable.

Test for detecting Arsenious Acid in the presence of Arsenic Acid and Tartar Emetic.—(Pharm. Centralhalle, xii. p. 157.) H. Hager recommends the following test for arsenious acid, which, as will be seen, is the same as Marsh's test, with the exception that potassic hydrate is used instead of sulphuric acid.

If a solution of arsenious acid in pure potassic hydrate be heated gently in a test tube with a few pieces of pure zinc, until an evolution of gas takes place, and a piece of parchment paper which has been moistened with a solution of nitrate of silver be introduced into the mouth of the test tube, the paper will become colored dark brown on account of the decomposition of the nitrate of silver by the arseniuretted hydrogen which escapes. The presence of organic matter does not interfere with this test, and the evolution of gas is rendered more active by the introduction of a few pieces of pure magnesium with the zinc.

If arsenic acid, oxide of antimony, or tartar emetic be treated in the same way, no arseniuretted or ammoniuretted hydrogen is evolved, but only pure hydrogen; hence no coloration of the nitrate of silver paper is produced. In the case of antimony compounds, the antimony is deposited in the metallic form in the test tube. If arsenious acid is mixed with the compound of antimony, it is not decomposed by the nascent hydrogen until all of the antimony present has been deposited; but as soon as this result has been accomplished, the paper becomes colored by the arseniuretted hydrogen evolved. This fact can be utilized in the detection of arsenious acid as an impurity in tartar emetic. Care must be taken not to allow the nitrate of silver paper to touch the side of the test tube, else it may become colored by the action of the potassic hydrate. In testing five to seven grains of tartar emetic for arsenious acid, the potassic hydrate solution and zinc should be warmed gently in a water bath for one or two hours, by which time all of the antimony will be separated in the metallic form, and the arsenious acid, if present, be detected by the coloration of the nitrate of silver paper.

Estimation of Arsenic.—Dr. John C. Draper, in the *American Chemist* (June, 1872), describes a modified Marsh's apparatus for the quantitative determination of arsenic which is particularly well adapted for toxicological investigations. By means of this modified Marsh's test, the arsenic is obtained in the metallic state and can be directly weighed.

In consequence of the difficulty of obtaining zinc perfectly pure, he recommends an apparatus by which metallic magnesium can be used, if it is impossible to obtain zinc free from arsenic and antimony. This apparatus consists of a glass tube about one inch in diameter, the lower end of which is drawn out and curved upwards like the curve of the letter U. This bend is then filled with mercury, through which a ribbon of metallic magnesium can be passed into dilute sulphuric acid, and the amount of hydrogen gas evolved regulated by the amount of magnesium pushed through the mercury. The upper part of the tube is arranged in the same manner as the neck of the flask in an ordinary Marsh's apparatus. When pure zinc can be obtained, it can be used in the ordinary flask.

Now, in order to obtain the whole of the arsenic in such a form that it can be weighed without loss, and can subsequently be tested, Dr. Draper uses a hard glass tube one-fourth of an inch in diameter, drawn out at one point so as to form a tube two inches long and one-tenth of an inch in diameter, into the narrow portion of which is dropped a previously weighed faggot or bundle of clean platinum wire, so that it fits closely. This tube is again drawn out at another point, and finally bent so that the end dips into a solution of nitrate of silver. To use the apparatus, hydrogen is generated by means of the magnesium (or zinc) and dilute sulphuric acid, dried by passing through a tube filled with chloride of calcium, and passed through the tube into the nitrate of silver solution. A Bunsen flame is applied to the second point at which the tube is drawn out. If no deposit appears beyond the flame, and no decomposition of the nitrate of silver solution takes place, the apparatus and reagents may be pronounced pure. The arsenical solution can then be introduced in the ordinary way, and a Bunsen flame, from a burner having an elongated opening one-sixteenth of an inch wide and one inch long, is applied to the portion of the tube which contains the platinum. *The platinum unites with all of the arsenic*, even though the arsenical solution be strong and the evolution of the gas rapid. In order to determine when all of the arsenic has been removed from the solution, the gas can be tested by removing the elongated burner for a few moments. If arseniuretted hydrogen is still being evolved, a stain will appear beyond the lower flame. If none appears, all of the arsenic has been deposited on the platinum, which can then be removed from the tube and weighed. The arsenic can be separated from the platinum by heating the latter in a tube through which dried oxygen gas is made to pass, and the end of which dips into boiling distilled water. It is thus converted into arsenious oxide, most of which condenses in the cold part of the tube, and can be examined by the ordinary methods.

Chemical Action of Oleum Terebinthinæ on Phosphorus.—Köhler states (*Chem. Centralbl.*, 1871, p. 68) that the antidotal action of impure oil of turpentine, i. e., that which contains oxygen and water, upon phosphorus depends upon the fact that the phosphorus is oxidized, and unites with the turpentine to form a crystalline substance having acid properties and termed by him "turpentine phosphorous acid." This substance unites readily with some of the bases to form salts which have a definite composition. It does not act as a poison when administered to animals in doses of from 0.3 to 0.03 grammes (one-half to four and a half grains), but is absorbed and eliminated in part at any rate by the kidneys, imparting to the urine a camphor-like odor, and it can be recovered from the urine by distillation, being detected in the distillate by its reducing power, it readily reducing corrosive sublimate to calomel, or nitrate of silver to metallic silver. If we allow the distillate to remain exposed to the air for several days, or treat it with oxydizing agents, oxygen is absorbed and phosphoric acid can be detected by applying the proper tests. Chemically pure oil of turpentine dissolves phosphorus upon the application of a gentle heat, but deposits it again unchanged, and not in the form of turpentine phosphorous acid, upon cooling. Pure oil of turpentine, therefore, is not an antidote for phosphorus.

Analysis of Animal Tissues for Curarin.—Dr. Karl Koch, in the *Chem. Centralbl.* (1871, p. 232), highly recommends the three following chemical tests for curarin, by means of which it can readily be detected in the urine and fæces after the administration of a therapeutical dose. He acknowledges at the same time that in medico-legal cases the most reliance is placed upon the physiological test on animals. 1. Concentrated sulphuric acid produces in $\frac{1}{4}$ to $\frac{1}{2}$ c.c. of a solution containing .06 milligramme ($\frac{1}{1000}$ grain) an immediate red color, which becomes darker on standing, and in four hours is changed to a rose red, which color remains permanent for about two days. 2. Dilute sulphuric acid (one part of acid to fifty of water), added to the above solution and evaporated on a water-bath, is colorless at first, but upon concentration becomes first reddish, then purple, and finally black. If removed from the water-bath when the color is purple, it retains this color for several hours. If to this colored fluid potassic bichromate be added, the color disappears. 3. The most common test for strychnia, namely, concentrated sulphuric acid and potassic bichromate, when applied to a solution of curarin which contains $\frac{1}{500}$ grain, gives first a brownish-red color, which changes quickly to a blue and finally becomes red, the last color remaining permanent for several hours or even days. Curarin differs from strychnia, therefore, in the more rapid change from the beginning to the formation of the red, and in the permanency of the red.

From the results of many experiments, Dr. Koch has arrived at the following conclusions in regard to curarin: 1. That the physiological action of curarin is no more powerful than an equal dose of the curare from which it was prepared. 2. That curarin can be detected by chemical reactions not only after death in cases of fatal poisoning, but also during life after the administration of curare in non-fatal doses. 3. In cases which end fatally, curarin can be detected in the urine and in all of the viscera. He succeeded but once in detecting it in the blood. 4. In non-fatal cases, or cases of chronic poisoning, it can be detected in the vomitus, urine and fæces; in the latter after subcutaneous injection. 5. That curarin is eliminated from the system unchanged. 6. That the first symptoms of its action appear in cats, when a fatal dose has been administered *per os*, in about forty-five minutes, and then it can be detected in every part of the intestine. 7. That it is probably passed into the intestine with the bile, since it can be detected in the fæces, after subcutaneous injection, in cases which do not terminate fatally. And since extracts obtained from the liver react more powerfully both chemically and physiologically than those obtained from other organs, and since it can be detected for several days in the fæces after the cessation of its administration, that it probably accumulates in the liver, and is gradually eliminated from it. 8. That the liver, stomach, heart and lungs are the organs which in medico-legal cases should be taken for analysis.

Dr. Koch prefers the method of Dragendorff for the extraction of the alkaloid from the tissues and fluids of the body.

On the Use of Phenol (Carbolic Acid) in the Analysis of Tissues for Curarin and Narcein in Medico-Legal Cases.—F. Solomon proposes (*Fres. Zeit.*, x. p. 454) a modification of Dragendorff's process for the extraction of these alkaloids, based upon their solubility in phenol. The tissues are first extracted with acidulated alcohol, the alcoholic extract evaporated to dryness, and the residue treated with water. The aqueous solution, after being made alkaline with potassic hydrate, is shaken successively with ether and amyl alcohol. A small portion of the narcein is dissolved by the amyl alcohol, but by far the larger part remains in the water. The alkaline solution is now neutralized with sulphuric acid and shaken with an equal volume of phenol. The two liquids quickly separate, and the phenol can be removed with a pipette. This process is repeated to remove the last trace of the alkaloids, the phenol washed by shaking with water, and then allowed to evaporate spontaneously. The amorphous residue is then treated with acidulated water which dissolves the alkaloid, and this solution, after being poured from the resinous mass which usually remains, evaporated to dryness. Absolute alcohol removes the narcein from the residue, and upon evaporation leaves it sufficiently pure for testing. In one experiment in which 0.05 grammes of narcein were mixed with food, 0.041 were recovered by this process.

Curarin can be obtained by exactly the same process. None, however, is dissolved by the amyl alcohol, that reagent serving only to remove impurities.

Poisoning by Nitro-benzine.—A case of nitro-benzine poisoning is reported in full by Dr. Robt. Bahrdt in the *Viereiljahrsch. f. Gericht. Med.* (April, 1872, from *Arch. d. Heilkunde*, 1871, p. 320), in a young man 19 years old, who, with others, prepared a kind of "schnaps" by mixing together one part of alcohol, two parts of water, and twenty drops of nitro-benzine. This mixture filled an ordinary wine bottle, and about one-third of the whole was taken by the patient between 7 and 8, A.M. The dose of nitro-benzine was, therefore, six or seven drops. Death occurred at 5½, P.M.

The most noticeable points in connection with the case were, that symptoms of poisoning did not appear until some time after taking the dose, a greyish-blue color of the skin, unconsciousness, deep brown color of the blood, the odor of bitter almonds in the breath before death and during the section of the body after death, and an apparent improvement in the symptoms after the transfusion of about sixty grammes of blood.

From the observation of this and several other cases of nitro-benzine poisoning, the author draws the following conclusions: 1. That even after fatal doses have been taken, a latent period of one or two hours is possible, during which time no symptoms of poisoning appear. 2. That this latent period does not appear to depend upon the form of the preparation, upon the amount taken, or upon the habits of the patient. 3. In the latent period a peculiar greyish-blue coloration of the skin takes place. 4. A strong, frequent pulse, faltering respiration, unconsciousness, which may come on suddenly or gradually, and dilatation of the pupils are constant symptoms of nitro-benzine poisoning. Vomiting and convulsions are usually present, but may be wanting. A temporary improvement even in fatal cases is possible. 5. That nitro-benzine poisoning differs from prussic acid poisoning chiefly in the slow appearance of the symptoms, in the greyish-blue coloration of the skin, and in the dark brown color of the blood, in cases of prussic acid poisoning the symptoms coming on suddenly, and the blood having a red color. 6. Early use of the stomach-pump, inhalation of ammonia, and transfusion of a large amount of blood are recommended. 7. That at the autopsy the odor of bitter almonds is always perceptible, the blood is dark brown and fluid, and cadaveric rigidity is very marked.

Urinary Chemistry.—A few words here in regard to the information as to the pathological changes taking place within the body which can be gained from the application of a few simple tests to the urine, such as every physician in active practice can perform in a few minutes with the aid of a small amount of apparatus and a very few reagents, may not be out of place; although it can by no means be said to form a part of the recent progress in urinary chemistry, which may be said to have assumed a scientific character since organic chemistry has made such immense progress, and since the improved methods of construction and observation with the microscope have been discovered, by which more accurate knowledge has been gained of the various processes of metamorphosis taking place in the system on the one hand, and of the anatomy and physiology of the kidney on the other.

It will be the object of the writer in the following very brief remarks to remove from the minds of many the erroneous impression, that the physician can obtain no useful information from an analysis of the urine unless he has at his command a well-stocked laboratory and elaborate apparatus, by mentioning some of the more important practical points in connection with urinary chemistry; for space will not permit of anything more than a mention of the common tests employed. A full description of them, and the precautions necessary to be observed in their performance, can be learned by consulting the ordinary text books on the urine.

The urine being a solution of the effete matters of the system, which are no longer necessary to the performance of the vital functions and which are consequently cast off by the system, contains them under normal circumstances in pretty constant quantity. Those products of metamorphosis, which are formed by the system normally, and are eliminated by the kidneys, are termed the "normal constituents" of the urine, and if these are found, by an analysis of the urine in any given case, to vary largely from the average amount, we may at once conclude that those processes by which they are produced are abnormally increased or diminished. Thus an increase in the metamorphosis of the nitrogenous tissues of the body attends all acute febrile diseases and is characterized by an increase in the urine of the products of the oxidation of these tissues, namely, urea and uric acid. Moreover, since uric acid is a lower product of oxidation than urea, if, for any reason, the process of oxidation is impeded, as in diseases of the lungs, a relatively larger amount of uric acid is produced, and therefore it is found increased in the urine: i. e., relatively to the amount of urea; some impediment to the process of oxidation of the nitrogenous tissues may then be diagnosticated. On the contrary, a very great diminution in the amount of urea, if of long continuance, leads at once to the suspicion of uræmic poisoning, and a daily examination is of special importance on that account in cases of renal disease. An empirical rule has been adopted for the estimation of urea, namely, to add four to the last two figures of the specific gravity. The sum represents the number of grammes eliminated in the twenty-four hours. Thus, the normal specific gravity being 1021, the number of grammes eliminated normally would be, according to the above rule, twenty-five (1 gramme=15.4 grains), which is about the average amount. Of course there are some exceptions to this rule, as in diabetes mellitus.

An increase in the amount of the coloring matters indicates either an increased metamorphosis of the blood globule, or a suppression of the only other colored secretion of the body, the bile. Thus, in cases attended with an increase in the decomposition of the blood globule, as acute fevers, scurvy, arseniuretted hydrogen poisoning, &c., the urine contains much coloring matter; in the last two cases, however, this coloring matter is chiefly an abnormal one, namely, hæmatin. The urine and the bile are the only colored excretions of the body; the liver and kidneys, therefore, are the organs which remove the products of metamorphosis of the coloring matters from the system. If, then, no pigment is removed by the liver on account of degeneration of that organ, an excess must be eliminated by the kidneys. The most important normal coloring matter of the urine, and the one to which the principal part of the color is due, is urophaein (Heller), the exact composition of which is uncertain, but it is probably a mixture of two or more distinct pigments, one of which has been isolated and is mentioned above (hydrobilirubin or urobilin). The exact pathology of uroxanthin, the other normal urinary pigment of Heller, is far from being determined, but practically it is found increased in renal diseases (especially acute nephritis and pyelitis), in diseases of the spine, and generally in disorders of the nervous system.

Important inferences can also be drawn from a determination of a diminution in the amount of chlorides in the urine, it being diminished in all acute fevers, especially if they are accompanied with exudation or diarrhœa; thus, in pneumonia the chlorides may be entirely absent from the urine, the excess having been removed from the blood with the exudation, and their reappearance in the urine indicates commencing absorption of the exudation. In pneumonia, by testing the urine, this commencement of the absorption can be detected even before it can be detected by auscultation and percussion. An increase in the amount of the chlorides depends merely upon an increased ingestion of common salt, and is, therefore, of no importance.

An increase in the amount of the phosphates of the alkaline earths in the urine depends upon an abnormal metamorphosis of those tissues containing the earthy phosphates, such as the bones; hence in all extensive diseases of the bones, as osteomalacia, rachitis, &c., we find an increased amount of the earthy phosphates in the urine. In the same manner, an abnormal amount of sulphuric acid in the urine depends upon an abnormal oxidation of those constituents of the body which contain sulphur (provided we eliminate an increased ingestion of sulphates or substances containing sulphur as food or medicine), and is usually a symptom of acute fevers, which are attended with increased oxidation of such constituents, as albumen. This increase is noticed in the highest degree in meningitis, acute rheumatism, and also in affections of the muscular system.

In the analysis of the urine for the above substances, the importance lies in the amount excreted in a given space of time, as the twenty-four hours, and not in the relative amount in 1000 parts of urine, because in any diluted urine the normal constituents are relatively diminished, although the amount excreted may be absolutely increased. Hence the importance of always knowing the quantity of urine passed in the twenty-four hours, or at least in a definite space of time.

By the application of simple tests we can not only determine an increase or diminution of those constituents which are found in the urine normally, and hence draw inferences as to the general condition of the system, but we can also detect the presence of abnormal substances, when by the failure or faulty performance of certain functions they are produced, find their way into the blood and are eliminated by the kidneys, as is almost invariably the case when such substances are formed, and oftentimes the detection of abnormal substances gives us an exact or an approximative diagnosis. Thus the detection of grape sugar in the urine is diagnostic of diabetes mellitus, in which not only is the qualitative determination important, but also the quantitative, since it affords valuable information as to the progress of the disease and the result of treatment. The presence of biliary pigments indicates the existence of hepatic disease, functional or organic. Leucin and tyrosin, which are products of imperfect oxidation of nitrogenous substances, and indicate, when found in the urine, an exceedingly severe interruption to that process, are found in acute yellow atrophy of the liver, acute phosphorus poisoning, and sometimes in typhus fever and smallpox, and can be detected under the microscope by their crystalline form either in the sediment, in the residue after evaporating a drop of urine upon a glass slide, or in the precipitate produced by adding to the urine a large volume of alcohol, in which menstruum these substances are insoluble.

The presence of albumen in the urine occurs so frequently and may be caused by so many pathological conditions, that the test for it should never be omitted when the examination of the urine is at all important, it being produced by obstruction to the abdominal circulation, as in tumors, ascites, &c.; also in cases attended with an anæmic condition of the blood, in all forms of renal disease, and in those local affections in which blood or pus may find their way into the urine.

The above brief sketch is intended to give an idea of the kind of information in regard to general diseases which can be obtained by the physician in a few moments, by the application of a few chemical tests to the urine, such as are indicated in the table below. In addition to this, the most exact information in regard to local affections of the urinary tract is often afforded by the chemical and microscopic examination of the urine. It is needless to refer to the value of the microscopic examination of the sediment in these diseases, as it enables us frequently to locate exactly the seat of the affection, and to determine the composition of a calculus the existence of which has been discovered by other means. The importance of the information gained by an accurate examination of the sediment, is usually stated to be double that of the chemical analysis of the liquid.

The following table, "Heller's Analysis of the Urine," which has been distributed to the medical classes at Harvard University for many years, is an excellent guide as to the important properties to be considered and substances to be tested for, and contains a list of the important constituents, and the most common test for each. It will be seen by an inspection of the table that the tests are simple, and the only apparatus required is a few test tubes, a wine glass, a spirit lamp, a urinometer and a microscope.

HELLER'S ANALYSIS OF URINE.

Physical Properties.

COLOR		
ODOR		
REACTION	Litmus. Turmeric.	
SP. GR.	Urinometer.	
SEDIMENT		

Normal.

UROPHÆINE	H_2SO_4 oz. ss.+Ur. gtt. 10.	Brown color.
UROXANTHINE	HCl oz. ss.+Ur. gtt. 30.	Amethyst color.
UREA	Ur. gtt.+HNO_3 gtt.	Nit. Urea Cryst.
URIC ACID	Ur.+$\frac{1}{8}$ HCl+24 hrs.	Uric acid Crystals.
CHLORIDES	Ur.+HNO_3+(Ag NO_3+8 Aq.)	Clumpy white ppt.
SULPHATES	Ur.+(Sat. Sol. $BaCl_2$+$\frac{1}{8}$ HCl.)	Ppt. within hr.
EARTHY PHOS.	Ur.+NH_4 HO in excess.	" " "
ALKAL. PHOS.	Ur.–Earth. Phos. ppt. by NH_4HO filt. and add (Sat. Sol. $MgSO_4$ +HCl made Alk. by NH_4 HO)	Precipitate.

Abnormal.

ALBUMEN	Heat or HNO_3	Coagulate.
BILE PIGMENTS	Ur. spread on plate+HNO_3 gtt.	Prismatic rings.
SUGAR	Ur.+$\frac{1}{2}$ Liquor Potassæ. Boil and let it cool.	Brown color.
URERYTHRINE	Ur.+HA+PbA_2	Fawn ppt.

BLOOD CORPUSCLES	By Microscope.
PUS CORPUSCLES	" "
CASTS	" "

The tests are all qualitative ones, but by comparing the depth of color or quantity of precipitate with that produced in normal urine by the same treatment, and by always using the same amounts of urine and reagents in the tests employed, an approximative idea of the quantity of the normal constituents and of albumen may be obtained. This method of quantitative determination gives results which are by no means chemically accurate, but are sufficiently so to afford the physician some information as to the result of his treatment in certain cases, and valuable assistance in the diagnosis and prognosis of many diseases. It is needless to state, however, that exact quantitative estimations of certain urinary constituents are preferable, and the conclusions arrived at more exact and satisfactory. Such quantitative analyses can be easily performed in a few minutes with the requisite apparatus and reagents. Thus in the determination of sugar with Fehling's solution, of urea with a standard solution of mercuric nitrate, and of the chlorides with one of nitrate of silver, the only additional apparatus required is a pipette and a burette. Full descriptions of these tests are given in all of the ordinary text books and need not be repeated here.*

Bibliographical Notices.

Autumnal Catarrh. (Hay Fever.) With three Maps. By MORRILL WYMAN, M.D., late Hersey Professor Adjunct of the Theory and Practice of Medicine in Harvard University. New York: Hurd & Houghton. 1872. 8vo. Pp. 173.

DR. WYMAN, himself a victim to the odious, tormenting annual visitant which is the subject of his monograph, has entered upon its investigation with a truly patient and philosophical spirit. It would be irony indeed to say that he writes *con amore*, but it is no less true that a personal sense of the wretchedness of the victims of autumnal catarrh gives a zest to his investigations, and a thoroughness to his experiments, which would hardly have been looked for except from one who is himself a sufferer.

Dr. Wyman claims, and we think rightly, that he is the first medical writer to describe this annual autumn visitant to the eastern parts of the United States. Led by the suggestion of Dr. Bostock, who gave to the early summer complaint known in England as hay fever or hay asthma the name of *catarrhus æstivus*, he gives to the subject of his monograph the name of *catarrhus autumnalis*, or autumnal catarrh; which he shows, we think, quite conclusively, to be a strictly American disease. In popular language there is much confusion in the terms applied to this affection—rose cold, hay fever, hay asthma and the like being indifferently applied to any periodically recurring catarrhal affection coming on at any time from early summer to the beginning of autumn. Dr. Wyman takes particular pains to show that two distinct disorders are thus confounded with each other—one beginning in the last week of May or first week of June and lasting until about the first week of July; the other coming on towards the close of August and continuing about six weeks, and being much the more severe affection of the two. As a rule, the sufferers from one of these complaints are free from the other.

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* Writers of papers on Medical Chemistry and Toxicology will contribute much assistance in the preparation of these reports if they will forward copies of their papers, addressed to this JOURNAL.—EDS.

We do not propose to describe this complaint in detail. Its title suggests to the medical reader the general characters of its symptoms, and we will only say that it attacks all the tissues and organs which are ever invaded by catarrh, usually passing through three stages, named by Dr. Wyman the catarrhal, the bronchial and the spasmodic; the last being characterized by a violent spasmodic cough, frequently accompanied by very severe asthma.

One of the most curious facts connected with this singular affection is the regularity of its annual return; many of its victims being attacked on the same date year after year, and none of them, after one seizure, ever escaping its visitation, if they continue to reside where they were first attacked. Its cause is a mystery, and is the subject of much speculation among its victims. Dr. Wyman himself is inclined to believe that it is connected in some way with vegetation, perhaps is due to some one widely distributed plant, but the evidence as yet is far from settling this point. Another singular fact is the cessation of the disease on the appearance of frost; the statistics collected by the author show conclusively that in most cases these events are almost simultaneous. One cannot but be reminded by this curious coincidence of the immediate disappearance of the malarial diseases of the southern portions of our country under the same conditions. In fact, the northern disease would seem to be in many respects the counterpart of those of the south; the mystery of its specific cause, the period of annual return, the exemption of certain localities from invasion, its cessation with the return of the cold season, presenting most striking features of resemblance.

With regard to the exact limits of the territory over which autumnal catarrh prevails in the United States, Dr. Wyman's researches as yet have not furnished him with a precise determination. His proximate results indicate that it is found on the Atlantic coast from the Capes of Virginia in latitude 37° N., to Eastport on the coast of Maine, latitude 45°. It is found as far west as St. Paul, Minnesota, latitude 45°, beyond which he has received no satisfactory evidence of its existence; the western line has been traced down to St. Louis, latitude 38° 37′.

Dr. Wyman discusses the question of the influence of residence upon the duration of this disease, showing that, with the exception of a single class of localities, there is no certain haven of refuge for its unhappy victims, where they can escape its regular visitations, or shake off the attack after it has seized them. The singular discovery has been made that there are certain localities about the White Mountains of New Hampshire where these unfortunates may find peace. These places are, as a rule, at a higher elevation than eight hundred feet above the sea level. On this interesting point we quote Dr. Wyman's own language:—

"The first person known by me to have been relieved by a visit to the mountains was a lady from Lynn, Mass. She had suffered severely, especially in the asthmatic stage. She accidentally noticed, in 1853, while travelling in the White Mountain region, that her catarrh, which for twelve years had commenced August 20th, had failed to make its appearance. The following year she visited the same region before the usual time of attack, with the hope of escaping it. She did escape it. During the remaining ten years of her life, until 1864, she was at the Franconia Notch, White Mountain Notch, or at the Glen House—most of the time at the latter place. During this whole period she obtained complete relief. In 1860, Jacob Horton, Esq., of Newburyport, Mass., who had suffered so severely that he was obliged to keep his room during much of the attack, in answer to my inquiries, replied, 'the only relief for me is at the White Mountains.'

"These facts drew my attention to the probable value of mountain residence. Other instances of relief soon became known to me, and persons suffering from this malady were advised to repeat the mountain experiment. They did so, and were successful."

One of the most curious circumstances about this discovery is that this complete immunity from the disease is not equally distributed throughout the White Mountain region, but is confined to certain neighborhoods, and this without any appreciable influence of position to account for it. The line of division between them and those which furnish no protection is quite strongly marked, a ride of five or six miles being often sufficient to bring back the sufferer to a full consciousness of his misery. We cannot refrain from quoting Dr. Wyman once more, so graphic is his description of the comfort which these charmed spots afford to those who seek relief there.

"The change in a sufferer fully under the influence of his malady, on arriving at the mountains, is sudden and striking. His first night's sleep is refreshing, and in the morning his most annoying symptoms—the itching and watering of the eyes, the sneezing and nose-blowing, or the asthma—have much diminished. A second night is usually followed by a day in the course of which most of the symptoms disappear. If, however, the disease has continued until the mucous membrane of the nostrils and air-tubes has become irritated and thickened, the disappearance of the effects of these changes is gradual. Besides this relief of the local symptoms, a still greater change takes place in the spirits. Activity of mind and body replace discouragement and weakness, and the sufferer feels assured that he has at last shaken off his enemy."

It is a singular fact that the disease of which we are speaking is almost wholly confined to the classes who lead more or less sedentary lives. Of fifty-five cases in which Dr. Wyman gives the profession of the patient, all but six—a gardener, a carpenter, a butcher and three farmers—were of this class. His limited statistics also indicate that it belongs to the early and middle periods of life, and that males are twice as subject to it as females. It also runs in families; in one-fifth of the cases collected by Dr. Wyman, more than one member of the family being affected.

The sufferers from autumnal catarrh will turn with eagerness to the chapter on treatment, but will find, we are sorry to say, but little comfort there, so far as the efficacy of drugs is concerned. In fact, Dr. Wyman frankly says at once that no well-authenticated case has come to his knowledge in which the disease has been broken up in the midst of its career, or its annual return prevented by the use of medicines. The only remedy as yet known is a resort to the localities we have spoken of, about the White Mountains. It is to be hoped, now that the medical profession have been brought, by the admirable treatise before us, to a distinct recognition of this disease as a specific affection, that the time is not far distant when a different condition of things may be true.

Dr. Wyman gives details of a good many cases, and closes with a tabular view of eighty-one in all. There are several valuable maps, so colored as to present very clearly the topography of the disease, and all through the work, mostly in the form of foot-notes, he gives, in the language of the patients themselves, most interesting and graphic details of the affection in its various forms. These are distributed in such a way as to add very much to the interest of the text, illustrating as they do the various shades of difference in different cases, and confirming the author's statements regarding the various features of the affection and its methods of attack. An over-fastidious critic in a cotemporary medical journal seems to think such material is quite out of place in a medical treatise—beneath the dignity of one who aspires to the honors of medical authorship. We disagree with him entirely. To our minds they are of great value, confirming the author's statements, and often by their piquancy and humor enlivening the professional sobriety of the text. No reader, we believe, except the critic aforesaid, would willingly spare, for instance, the exquisite humor, running sometimes into broad farce, of Henry Ward Beecher's doleful accounts of the misery he is called to endure once a year from this complaint, until he reaches his haven in the White Mountains. At the risk of compromising our professional dignity we cannot forbear copying a single passage which Dr. Wyman quotes from the *New York Ledger*. Describing his sufferings, he says:—

"The nose sympathizes. Your handkerchief suddenly becomes the most important object in life. By the next day the slightest draft of wind sets you to sneezing. It is a revelation. You never before even suspected what it was to sneeze. If the door is open, you sneeze. If a pane of glass is gone, you sneeze. If you look into the sunshine, you sneeze. If a little dust rises from the carpet, or the odor of flowers is wafted to you, or smell of smoke, you incontinently sneeze. If you sneeze once, you sneeze twenty times. It is a riot of sneezes. First, a single one, like a leader in a flock of sheep, bolts over; and then, in spite of all you can do, the whole flock, fifty by count, come dashing over, in twos, in fives, in bunches of twenty."

We thank Dr. Wyman for his book, and think he has done his work well; and sincerely hope it will lead to such diligent study of the subject of which it treats that each sufferer may soon have a remedy at his own door.

S. L. A.

THAT clerical and lay functions were once conjoined, the following old-time advertisement will sufficiently show: "Wanted, for a family who have had bad health, a sober, steady person in the capacity of doctor, surgeon, apothecary and man-midwife. He must occasionally act as butler, and dress hair and wigs. He will be required sometimes to read prayers, and to preach a sermon every Sunday. A good salary will be given."—*Medical Times.*

Boston Medical and Surgical Journal.

Boston: Thursday, January 9, 1873.

The following communication to the *Boston Daily Advertiser* of the 4th inst. is reproduced in this connection because we wish to endorse it as presenting a scheme for a Board of Health which, we believe, will meet with favor from the whole medical profession. The initials of the writer will be recognized as those of a medical gentleman exceptionally expert in sanitary matters; if the scheme which he presents could have the advantage of his practical aid in its realization, the exigencies of public health in this community would be very fully met.

The plan is one fitted not only for the sanitary needs of Boston, but for those of every city of considerable size in the country.

"Everybody now admits that an independent Board is needed in Boston to protect the public health, and a great many people wonder why the ordinance recently adopted by the city authorities is not immediately put in operation. . . . . .

"It is now quite evident that the new law is in itself responsible for the delay. A careful reading of the ordinance will show that the powers of the proposed Board are by no means commensurate with their responsibilities. The cleaning of streets, alleys and passageways, the removal of house offal and of ashes are retained by a committee of the Board of Aldermen. No competent Board of Health would willingly be held accountable for the proper execution of these important duties unless all details of their performance were under their direction. How important they are in a sanitary view of the matter needs no discussion. . . . . .

"Another difficulty with the law may be found in the provision that members of this Board shall give up all other active business. Men whom the public would trust with the protection of the city from avoidable disease are generally earning, in some way, at least as much money as would be offered them in this position. . . . . .

"We venture to suggest a general plan which would avoid some of the difficulties to which we have referred. Let us suppose that the deliberative and executive duties could be divided. A Board of five members, consisting of a physician, a lawyer, a merchant, an engineer and a chemist, could probably be organized on a basis which would command the confidence of the public, both for their ability to deal with questions affecting public health, and their integrity in the disposal of the large sums which are required to secure it. They would consider all matters relating to health and pass the necessary orders. Their cares would be great at the outset, until the system was fully arranged, but afterwards they would not be very onerous. Their payment might be on a liberal scale, for the time actually employed in these duties, and would not, probably, exceed a thousand dollars a year for each member.

"The executive department should have at its head a physician of skill and tact, fully acquainted with sanitary science and appointed by the Board to carry out its orders, and also to keep the Board informed of every danger to public health, both present and prospective. This officer should be liberally paid, and made to feel secure in his office while his duties were faithfully performed. He might have a corps of "medical officers of health," one in every ward, whose business it would be to make known to their chief by daily reports the condition, needing amendment, of every street, yard, cellar and privy; the existence of any epidemic, of every case of infectious disease, of every form of nuisance; the condition of all tenement houses, stables, markets, of premises used for offensive trades, of undrained lands; the sale of articles of food dangerously adulterated or spoiled; and be always on the watch for causes of preventable disease. Such service might readily be secured from intelligent workers among the younger physicians, for a few hundred dollars a year each, since it would not in any way interfere with the study or practice of their profession. A deputy executive officer would be needed—perhaps more than one—and as many clerks as are now employed. A superintendent of city stables and teams would also be required, as at present.

"By this plan the old machinery of consulting physicians, superintendent of health and city physician might be dispensed with. The result of some such division of duties as we have indicated would be the establishment of an harmonious, efficient and practicable system.

G. D."

INFLUENCE OF EDUCATION ON PUBLIC HEALTH.—In 1827, Double noticed the influence which education exercised on the public health; and, a year later, Melier showed that in those departmnts of France where the numbers of children at school were greatest the mortality was least, with a few exceptions which could be explained by the action of special influences. M. Du Mesnil has recently again investigated the subject, and has given the results of his observations in the *Annales d'Hygiene Publique.* From a comparison of the reports on recruiting for the army with those on the progress of education, he has found that those departments in which the proportion of illiterate persons is greatest, present also the lowest duration of life, and the smallest average stature; while, in those where primary instruction is most completely carried out, the people live longer and are of larger build. He finds, also, that the number of recruits rejected as unfit for military service is greatest in those departments, where education is most neglected. —*British Medical Journal.*

TEA ADULTERATION.—The *North British Daily Mail* has published analyses of thirty-five samples of tea bought in different parts of Glasgow. Out of the thirty-five samples analyzed—twenty-seven of which were of black and eight of green tea—only six were unadulterated. All were high-priced, and none of the six was a sample of green tea. One sample contained *no tea at all,* so far as the analyst could discover. The adulterants which were used in this and the other twenty-eight cases were iron, plumbago, chalk, china clay, sand, Prussian blue, turmeric, indigo, starch, gypsum, catechu, gum, and leaves of various kinds, elm, oak, willow, poplar, elder, beech, hawthorn and sloe. It is but justice to the retail venders to state that the adulteration is not supposed to be their work; it is largely done in China, and is further carried on after the "tea" has reached Britain.

Medical Miscellany.

THE LABORATORY AT THE ROYAL INSTITUTION, LONDON.—During the absence of Professor Tyndall in America, the opportunity is being taken to rebuild the laboratories of the Royal Institution on a considerably enlarged scale.

IN JAPAN are four chemical laboratories where chemistry is taught to the natives. Three of them are conducted by Germans, and the fourth by an American. Another is nearly opened at Jeddo.

A LOSS TO SCIENCE. The following is a despatch to a Boston paper:—"*Halifax*, *Dec.* 21. Wm. Wately (colored), steward of the brig Union Star, having a disagreement with his captain, a few days ago, attempted to burn the vessel and kill the officers and crew. He stupefied all hands while they were sleeping, with muriatic acid, and then set fire to the vessel in the hold. Before he could extricate himself he was suffocated by smoke. The captain awakened in time to arouse the crew and extinguish the fire. Wately was the only person who lost his life."

It is to be regretted that Mr. Wately should have been thus prematurely cut off before publishing his investigations of the properties of muriatic acid.

PREGNANCY AT AN ADVANCED AGE.—Dr. Turner Anderson reported to a recent meeting of the Louisville College of Physicians and Surgeons the case of a woman delivered at the age of fifty-one of a still-born child at full term. She had given birth to a living child seven years before; since that time, she had menstruated irregularly. She was exceedingly thin, and her hair was white. Dr. Speed gave details of the case of a lady aged fifty-three, whose youngest child was nine years old.

EATING DIRT.—It is a common opinion that even in the most civilized communities it is not easy to avoid one's peck of dirt; and some individuals manifest quite a peculiar talent for it, and go through the operation with a readiness and grace which seem to imply a suppressed inclination for the practice. Dr. Frank Galt, of Iquitos, Peru, describes quite a devouring passion for it to prevail among the mestizos, or half-breeds of the Upper Amazon. His account is very interesting.

"Dirt-eating" he says "becomes an irresistible passion with these people. Even strangers, English, or the white Peruvian, who have married with the mestizo, and have had children by them, find its presence among their little ones the plague of their life; and the accounts one hears about the tyranny of this habit of dirt-eating on the victims of it would seem almost fabulous, were there not evidences all around one to give sanction to them. Children commence the habit from the time they are 4 years old, or less, and frequently die from the results in two or three years. In other cases, they grow to manhood or womanhood with the "appetite growing by what it feeds on," and I have seen here myself, in the case of a mestizo soldier, who was dying from the dysentery which generally, sooner or later, supervenes on this habit, the poor creature, half an hour before his death, detected with a lump of clay stuffed in his sunken cheeks, which he had dragged from the wall near where he was almost breathing his last. Officers here, who have the Indian or half-breed children as servants in their employ, sometimes have to use wire masks to keep them from putting the clay to their mouths; and women, as they lie in bed sleepless and restless, will pull out pieces of mud from the adjoining walls of their room to gratify their strange appetite, or will soothe a squalling brat by tempting it with a lump of the same material. If persisted in, the effects are surely fatal, at varying terms of years, some living tolerably to middle age, and then dying with dysentery, or from that disease at an earlier period. In the children dropsy is usually the most prominent apparent cause of decline and death."—*Brit. Med. Jour.*

The following, concerning the City Board of Health, is an extract from His Honor Mayor Pierce's address to the City Council, delivered Jan. 6th—

"The members of that board have not yet been appointed. Prompt action is urgently demanded, and I shall take the earliest opportunity to make nominations for your approval.

"The office is one of great importance and responsibility at all times; but it is especially so at this time on account of the prevalence of smallpox. The efforts made during the past year for the suppression of this dangerous epidemic have been entirely inadequate to the emergency. It has now assumed serious proportions, and I trust the citizens will recognize and cheerfully submit to the necessity of using more stringent measures than have yet been adopted.

"The hospital which has just been constructed is not large enough to furnish the accommodations required at this time. It is necessary that steps should be taken immediately to provide an additional hospital for temporary use. The first section of the new health ordinance provides that the mayor shall be vigilant and active in protecting the public health, and shall see that the laws and ordinances in relation to the same are enforced. Acting upon this general authority, I shall consider it my duty to aid and assist in every proper way those who are specially charged with the preservation of the public health; and in cases of emergency to exercise the paramount authority conferred by the charter upon the chief executive officer of the city."

NOTES AND QUERIES.

Correspondents, who wish notice to be taken of their communications, should authenticate them with their names. "Warren" will please notice.

Lead Poisoning.—Our correspondent is referred, for a full discussion of the subject, to the report of the Massachusetts State Board of Health for 1871. Various text-books, as, for example, Tanquerel, Niemeyer, Aitken, and Flint, also give valuable and practical information on the same subject.

A correspondent, "Hay Cutter," asks:—"Can parts completely dissevered ever be united?" We invite from our readers the communication of any facts which will shed light on this inquiry.

Pamphlets Received.—Peculiarities in the Operations of the three great Ovariotomists: Wells of London, Atlee of Philadelphia, and Thos. Keith of Edinburgh. By S. Fitch, M.D., Edinburgh. Philadelphia: J. B. Lippincott & Co. 1872. Pp. 16.

Married,—In this city, Dec. 31, Dr. John P. Ordway to Miss Ellen McGee.—Dec. 31, Dr. A. T. Davison to Miss Lucy Kelley, both of South Boston.—Jan. 1st, Dr. Ira L. Moore to Charlotte M. Aldrich, daughter of Daniel Chamberlin, Esq.—In New Bedford, 25th ult., Dr. Chas. B. Belt, of Boston, to Mary E. Tompkins, of Little Compton, R.I. [No Cards.]

Mortality in Massachusetts.—*Deaths in fifteen Cities and Towns for the week ending December* 28, 1872.

Boston, 167—Charlestown, 13—Worcester, 21—Lowell, 17—Milford, 4—Cambridge, 20—Salem, 11—Lawrence, 9—Springfield, 6—Fitchburg, 5—Taunton, 4—Newburyport, 6—Somerville, 2—Haverhill, 6—Holyoke, 3. Total, 294.

Prevalent Diseases.—Smallpox, 71—consumption, 39—pneumonia, 27—croup and diphtheria, 13—typhoid fever, 8—scarlet fever, 8.

The deaths from smallpox were as follows: In Boston sixty-three, Cambridge five, Charlestown two and Holyoke one.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, January 4th, 204. Males, 113; females, 91. Accident, 4—abscess, 2—apoplexy, 1—anæmia, 1—bronchitis, 2—inflammation of the brain, 1—congestion of the brain, 2—disease of brain, 11—cerebro-spinal meningitis, 1—cancer, 4—cyanosis, 4—consumption, 34—convulsions, 5—croup, 3—debility, 1—dropsy, 2—exposure, 1—eczema, 1—erysipelas, 1—remittent fever, 1—scarlet fever, 10—typhoid fever, 7—gastritis, 1—disease of heart, 3—intemperance, 2—disease of kidneys, 4—disease of the liver, 1—inflammation of the lungs, 9—marasmus, 6—measles, 1—old age, 4—paralysis, 2—pleurisy, 2—puerperal disease, 3—smallpox, 60—syphilis, 1—thrush, 1—tumor, 1—tetanus, 1—unknown, 3.

Under 5 years of age, 73—between 5 and 20 years, 20—between 20 and 40 years, 62—between 40 and 60 years, 29—over 60 years, 20. Born in the United States, 137—Ireland, 43—other places, 24.

THE

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Original Communications.

THE EARLY SYMPTOMS AND TREATMENT OF INSANITY.

By W. W. GODDING, M.D.

Physician at the Lunatic Asylum in Taunton, Mass.

[Read before the Bristol North District Medical Society.]

IN regard to the symptoms of insanity, the statements I shall make must be understood to be general, and not without frequent exceptions.

The man afflicted with bodily disease feels that he is sick and anxiously seeks the counsel of his physician; the man whose mind is becoming disordered either does not consult you at all, or, if he does, it is for some fancied ill far enough from his real trouble. The chances are that you are first called in by his friends, they having noticed something strange about him, while he assures you that he is not sick and has no occasion for your services; perhaps they have put a child to bed, with a cold in his head, for you to ostensibly prescribe for, while you are expected quietly to observe the suspected party and tell them what ails him. In nine cases out of ten there will be marks of disorder about his clothing or person in some way, for, as a rule, the insane show untidiness of dress; the passage of scripture, "clothed and in his right mind" is pertinent here. In the early stages of the disease the insane are often uneasy, in a constant motion, getting up, walking about the room, busy with nothing. Set about a piece of work, they do not finish it. Later in the disease, they will sit for hours in the same position; sometimes this is so from the commencement, not usually. The expression of the countenance is of importance in determining insanity. We hear a great deal about the eye of an insane person; well, there is something in it; it is apt to be an unquiet eye, sometimes dull, often with an anxious look. I notice they do not generally take well in a photograph. On the other hand, I must say that I have seen insane persons whose eyes you would have to look at a great while before you saw the insanity in them. Depression, as shown in the whole manner as well as in the countenance, is seen in the early stage of insanity, in a majority of cases; indeed, Dr. Saukey goes so far as to claim that no attack of insanity occurs primarily without an incubating stage of depression. I doubt the truth of this, but it is certainly a very common condition. The countenance is markedly changed in other respects. There is something blasting in insanity that withers up the freshness of life, making the young look prematurely old. Walk through the wards of our hospitals and see how few of the women have any traces of beauty. I have sometimes wondered, looking on faces whose ugliness made them repulsive, if they were ever anything but hideous; then, when I have seen the reason come back, the angular features round into a smile, the soft light gather again in the eye, the countenance grow radiant with intelligence and "clothed upon" with a beauty from within, I have realized how to the mind all things were possible, even to the fulfilment of the prophetic promise that "beauty shall spring up out of ashes, and life out of the dust."

Sometimes, when you are speaking with your patient, you will observe that he is looking aside in an abstracted way, or has ceased to notice what you are saying, but is plainly occupied with something. The question, "Do you hear them?" will then often bring the quick answer, "Yes, and so do you," and you learn that he has been listening to a voice, a voice far more persuasive than yours, for singularly enough they will disbelieve and controvert what you say, but the hidden voice, that speaks only to them, they trust most implicitly, apparently without power against it; like the wedding guest in Coleridge's Ancient Mariner, "He cannot choose but hear." I have at present under my care a man who says he is troubled with "an undertone;" in obedience to this he makes assaults upon others, and, from the violence of his demonstrations at times, you would conclude that the voice spoke to him in anything but undertone. Hallucinations of hearing are not very uncommon in insanity and must be regarded as an unfavorable symptom. Hallucinations of sight are, in my experience, much rarer in insanity than in delirium. They are a prominent symptom in mania-a-potu, and they seem to me somewhat common in the early stages of puerperal mania.

Sleep, the "balm of hurt minds," as Shakespeare calls it, is often deficient, sometimes wholly wanting in the early stages of insanity. Indeed, prolonged loss of sleep without apparent cause is in itself a sufficient ground for grave apprehensions respecting the mental condition of the individual thus affected. It occurs in a great majority of the cases of insanity, and it is surprising how long they will sometimes survive apparently without sleep, and yet in the end recover. The return of sleep is often the commencement of convalescence.

The digestion is impaired in the early stages of insanity; the patient often neglects taking food or takes it at irregular intervals, sometimes refuses it altogether. The taste is rarely fastidious, more frequently it is wanting, and food is taken without reference to its character or quality. A ravenous appetite in insanity generally indicates a degree of dementia, and is so far an unfavorable symptom. A pasty tongue, bad breath and constipated bowels are common in all stages of insanity.

We are sometimes consulted in a case where the moral sentiment alone seems to be at fault. A not very uncommon form of this is seen in young persons recovering from typhoid fever; friends remark that they are somehow changed; perhaps they will be peevish and irascible, though previously amiable and mild, or they will be found to make use of language that is profane or vulgar, or they show a propensity to pilfer without much reference to the value of the article taken, though formerly most correct in all these respects. In the female, a queer mental condition of this kind sometimes depends upon a disordered menstruation and may be cured, but in males you will generally detect some symptoms of weakness of mind accompanying, and your prognosis, as regards cure, will be unfavorable. There is probably some organic change of the brain or meninges. There is a vice to which the friends of the patient give the popular name of "hard study." You will be consulted in regard to a young person whose failing health and strange conduct have attracted attention. You find a shy, generally shame-faced boy, disinclined to do anything, with hands cold, pasty and blue from sluggish capillary circulation; the pupils of the eye are large, and there are general symptoms of nervous prostration; there is apt to be a moody, unpleasant expression of countenance. As regards close application to study, it usually consists in shutting themselves up alone and being little in society, their standing as scholars being something below mediocrity, and they are often in dementia when you are first called. It is somewhat rarer in girls, but you meet it every now and then. They differ in being very emotional and nervous, complaining of all sorts of aches and pains; they seclude themselves very closely, sometimes are bed-ridden with supposed womb difficulties. Strangely enough the manifestation of a deep religious feeling is not incompatible with this vice. Their devotion perhaps follows too literally the injunction to "enter into the closet and shut to the door."

In regard to another kind of case, you will hardly fail now and then to be consulted where it is very desirable to make a correct diagnosis. A man in the prime of life, or having hardly reached it, very well, active in some business, often very successful, or perhaps somewhat embarrassed, but ambitious, a driving, energetic man, working hard and living well, a good man for a chicken salad or a late supper, yes, a little fast, but not an inebriate. What will strike you, at first sight, will be his activity, his volubility and his self-sufficient and satisfied air. If his business has been embarrassed it is all right now. You will find he has made some very wild financial transactions, or if not, is all ready to do so. He has the most brilliant schemes and no misgivings as to their success; his bank balance is inexhaustible; he can give you a check for a million without the slightest inconvenience. He unfolds his magnificent plans before you, and while he is talking rapidly and earnestly his speech staggers over some word for a moment and then goes on as glibly as ever;

presently you mark it again, not a stammer, a little hesitation as of a person slightly intoxicated, that is all, but it is enough. To other eyes he may seem full of life, the picture of health, crowding work for a lifetime into a day, standing at the culminating point of a successful career. *You* see a man whose work is done, who will probably be dead within a year, and for whose recovery there is not a particle of hope. Paresis, or general paralysis as it is more commonly but less correctly called, in its brief but splendid stage of grandeur, seems the very inflorescence of insanity, and it is touchingly painful to those who watch its daily progress, to see how soon "the flower thereof fadeth and vanisheth away."

A word now of the early treatment of insanity. In the active forms of insanity two important points in treatment are to keep up the strength and to secure sleep. The first is best done by nourishment. Bark and iron may be indicated as tonics, but they are not food. The importance of food seems to be recognized, theoretically at least, by all physicians; at the same time patients are constantly being brought to the hospital who have eaten but little for weeks, who perhaps have absolutely refused all food for several days, and their haggard look and peculiar, characteristic breath show that they are actually starving. While realizing how great an advantage it is to have the patient take food voluntarily, and using every endeavor to have them, I am satisfied that in many cases an early resort to the feeding tube is the humane and the only justifiable course to pursue. There is no doubt but it might be used to advantage much oftener than it is, outside of hospitals. I think no year passes that I do not see lives saved by its use. Perhaps it is not generally understood how long life may be prolonged with nourishment taken only in this way; one, two and three months are common cases; eight and nine months are both within my experience, and the longer term resulted in recovery from the insanity. Without organic disease of the digestive organs there is no excuse for letting a person starve to death.

The second indication, to secure sleep, is sometimes best met by supplying food. A full meal is often a better sleep-compeller than an opiate. Milk, egg and brandy, with a little nutmeg and sugar, is very palatable and anodyne in its action. Food may, however, be well and readily taken and yet the sleep be wanting. When you have to give some drug as a hypnotic, what shall it be? The fashion changes here as everywhere else in medicine. Thirteen years ago, when I first began my acquaintance with the insane, half a grain of the sulphate of morphia, with two drachms of fluid extract of conium three times a day, was the standard prescription for active mania. Then we bought morphine by the ounce, going often to the druggist; now I buy a drachm and it lasts a wonderful while. The insane bear opium just as well now as they did then, but I do not. Still, there are some cases where there is nothing like it. To-day, chloral hydrate is the favorite reliance; we like it and hope that this anchor will hold. In doses of twenty to thirty grains at bedtime it often seems to work very satisfactorily, and is probably not more dangerous than any other equally powerful remedy. It will bear to be repeated, but not indefinitely. Where it fails to produce any effect in the ordinary full dose it is best to try something else. Bromide of potassium deserves its high reputation, but it is less a hypnotic than chloral. Ether by inhalation, in cases of prolonged wakefulness with high excitement, often has a most happy effect; as often the effect does not last beyond the administration of the remedy. The conclusion to which I come is that in mania all drugs are uncertain in their effect; that food, restraint in rooms, with confinement to the bed if necessary, are more important than medicine. Especially is it desirable not to overdrug the patient. The enormous quantities of opium that the insane will bear offers a temptation in that direction, but it will disappoint you, and when your patient is full of opium and chloral and ether and hyoscyamus, &c. &c., there is neither room nor appetite for any food. When such cases are brought to the hospital we generally stop everything and go back to first principles—milk, with perhaps a little lime water.

The treatment outside of drugs, of mind treated by mind, of travel, of change of surroundings, of occupation, all these questions you, as physicians, will be called upon to decide, and each individual case will present its own peculiar aspect. I can only say of this that the so called moral is generally more important than the medical treatment, and that as a rule change of scene and of all the surroundings benefit the insane.

The question of a removal to a hospital fairly comes in here. I do not hold that insane persons are to be taken indiscriminately to a hospital simply because they are insane; the question for the medical adviser in each case should be, can anything better be done for this man than to send him to the hospital? If not, urge upon his friends that it be done at once. The friends may not choose to take your advice, but if the insane man commits suicide or a homicide a few days later, they may come to respect your judgment and you would probably feel better about it than if your advice had been to keep him at home a while longer. But my impression is that the medical fraternity are not open to the charge of advising friends to keep insane patients away from the hospitals; I have sometimes feared the error might be the other way. It is often a doubtful question whether a delicate woman just confined and suffering from puerperal mania, should be removed at once, or whether the effort should not be made to provide for her for a few days at home. A large majority of the cases of puerperal mania recover if the physical system can be carried over the shock; hence, if a change involves removing in winter weather to any considerable distance, by open conveyance, it is very doubtful whether it is wise to attempt it. It is unpleasant to see a patient brought to a hospital in a moribund condition, though it now and then occurs. Where there is hopeless pulmonary disease, even though a fatal termination is not immediately imminent, it is generally ill-advised to attempt a removal; it is better for all parties concerned to have them die at home.

Harmless imbecility often crowds our hospitals when it might be finding enjoyment elsewhere; that friends have become tired of taking care of them at home is certainly a poor excuse for advising their removal to a hospital. One of the saddest sights to me is that of a poor old mother in the last stages of senile dementia, whose life and mind and everything have gone out in the service of her children, who has slept in the same bed and sat in the same corner in peace for I know not how many years, too feeble to strike a blow if she was so disposed, with hardly mind enough to entertain a delusion, now suddenly found to be too dangerously insane to be cared for at home, and packed off to the hospital. It is generally her last ride, for the shock of the journey breaks up the softened brain tissues; she runs down rapidly; is dead within three months; the hospital has the credit of her decease, and the friends, "verily they have their reward."

One other point and I have done. It is always pleasant to know that a high estimate is put upon one's ability, but it sometimes becomes a little embarrassing. A patient is now and then brought to the hospital accompanied by some near relative, who narrates the past history of the case with painful minuteness of detail, the more so because you see that it is one of those hopeless cases from the start, where little by little the mind has fallen out until there is nothing left. The first glance at your patient confirms all that has been told; the life has withered up, the face has a vacant look, for the soul left it years ago, and you turn to the friend and say, "I suppose your doctor told you what you might expect in this case?" "Oh yes, he said he could not do any more for him, but if we should carry him to Taunton the doctors at the hospital could make him all right in a few weeks." I beg, gentlemen, as a special favor, that *you* will not so over-estimate our ability.

So, cursorily, I have gone over the subject, not hoping to exhaust it, for the study of insanity is as infinite as is the mind whose thick teeming fancies are disordered by it.

"To minister to a mind diseased"—it is a study worthy of our highest ambition. Can medicines restore the mind? No, but we may remove the exciting causes, build up the exhausted body, replace the iron in the blood, give sleep to the tired brain, patiently ministering and waiting till a hand greater than ours with a touch infinitely tender shall cast out the demon and bring back the man.

Taunton, March, 1872.

In the New Haven *College Courant* we find the following:—

"Professor Rudolph Virchow, the eminent German physiologist, is a radical democrat in politics, and the only representative of that party in the Prussian Parliament of whom Bismarck said he was afraid."

Clinical Lecture.

ON FISTULA IN ANO.

By W. C. B. Fifield, M.D. Harv.

[Delivered at the Boston City Hospital, Nov. 30th, 1872.]

The patient now on the table for operation is the subject of fistula in ano. He entered the hospital more than a week ago with an abscess at the right side of the anus, which was opened and a considerable quantity of pus discharged. The wound was probed, but was not found to communicate with the rectum. We said that the abscess was opened. Now there is a right way and a wrong way to open such an abscess, and it is important for you to know the right way as given by Mr. Allingham and others. It is this. Lay the patient on the side corresponding to the abscess. Make him draw his knees as closely to his face as he can. Then pass your forefinger of the left hand, well oiled, into the anus, and place the thumb of the same hand below or to one side of the abscess. Now you have it, so to speak, between finger and thumb. If the patient be unruly he can scarcely get away from you, for by strongly hooping your finger you can hold him even if he were inclined to career wildly about the room. Having caught your abscess how shall you open it? The right way would be to open it towards the anus, the wrong way towards the perineum or coccyx, for opened in this latter direction, it would not discharge so well from the more ready approximation of its walls. Now a few days after the first abscess was opened, a second formed on the opposite side, and was also opened. Hence you now see a wound on each side of the anus. Do both of these openings communicate with the bowel, or does one, or neither? We will see. I take this long, probe-pointed director, known as Brodie's, and pass it into the opening on the left side. I am careful to pass the probe-director before I pass in my finger, for that would make the sphincter contract and I might have more difficulty in finding the intestinal opening. Where shall I seek for that opening? Years ago it would have been sought for high up the bowel; but M. Ribes showed that it is always or almost always just above the sphincter, sometimes a little higher, sometimes a little lower, but usually not more than an inch above the muscle. So it is here that I shall try for it. Whether the fistula be complete or of the blind external or blind internal variety, you can almost always feel above the muscle a spot harder than the surrounding tissues and withal a little depressed. I feel such a spot here, and steering the probe-director carefully, which the broad, flat handle helps me to do, for it does not roll like a common probe, it has passed into the rectum; and now I bring it out of the anus with the anterior wall of the fistula bridging it; and now I cut through it with the bistoury. I did not have to pull out a probe and substitute a director, only to push on the probe point and the channelled director followed it; thus time was saved. You see that the posterior wall of the sinus is hard, rugged, almost cartilaginous, and some operators like again to turn the edge of the knife to it and divide it down to the softer tissues beneath, thus making what the late Mr. Salmon, of London, called his "back cut."

This hard, rugged tissue is what old-fashioned people mean by the *pipe* of a fistula, and they believe that if this pipe be pulled out or destroyed the fistula will heal. Some surgeons (mostly empirics) who pretend to cure fistula without cutting, and make great use of caustics, without discrimination, say that they are able to do this, and clients flock to them, for people always prefer to be burnt rather than cut.

But let us examine the other opening; the probe enters freely enough, but my finger does not detect any internal opening, neither does it feel any hardened or depressed spot, or the probe lying close under the mucous membrane. Nevertheless an opening may exist, so we will try an hydraulic probe. A liquid will find its way along narrow and tortuous ways that a solid probe, however flexible, cannot. If, with a probe, you cannot make out the internal opening of a fistula, you may proceed in this way. Take a rectal speculum, from which, after introduction, one side can be removed, the best one is known as Hilton's, and passing it into the rectum remove the slide. Now fill a small syringe, having a long nozzle, with clear water, or milk, pass the end of the syringe into the fistula and slowly inject, turning the speculum from time to time until you have made it traverse the entire circle of the rectum. If there be an internal opening communicating with the outer, the liquid will surely find it out, and then you can carry your probe there too. If you have not a Hilton's speculum, you may make use of a method that I am about to use. Fill the syringe with tinct. of iodine, pass your finger into the rectum and inject; if there be an internal orifice your finger will be stained by the iodine. You see that my finger is *not* stained, hence I conclude that an internal opening does not exist. From what we have seen of this case, it seems reasonable to believe, from the rugged base of the sinus, &c., that the wound we laid open into the rectum was the original fistula, and that the second sinus is only an off-shoot from it, which we may expect to heal of itself after the division of the sphincter that we have made. Even had we found an internal opening of the second sinus, I should have been loth to have cut the muscle again, for when the sphincter has been divided a second time at a first operation, the wounds have been found either to heal very imperfectly, or not at all.

Another little point to which I will call your attention. Whilst trying to find if any internal opening of the second sinus existed, I found a large artery running just above the muscle. If this be found in a case where you are about to operate, you may make use of this little instrument, a sort of tourniquet, that I found in use at St. Mark's Hospital, in London. It consists of a canula with a female screw thread cut on the inside, a second canula with a male screw cut on the outside; this last canula terminates at its lower end, with a disk across the face of which a transverse bar is soldered. The male canula is screwed home into the female canula and the instrument is ready for use. Now take a leaden, silver or other wire, or even a silk or twine string, pass one end of it through the sinus into the rectum, and bring it out at the anus. Now pass both ends through the canula and make them fast to the transverse bar; by unscrewing the inner canula the ligature is tightened, and the instrument is left hanging at the anus. By unscrewing a little, daily, the ligature is made tighter and cuts through in about three days.

We will now dress the wound. I pack the cut fistula with fine jeweller's cotton, *not* oiling it, for by so doing I should defeat my object, which is to check any bleeding, and to set up a little inflammation. It will remain untouched for three days at least, leaving it to be thrown out by the first motion of the bowels, which I shall take care may not happen before that time. After this, I shall not dress the wound at all, merely keeping it clean, perhaps cutting away some overhanging edges or stimulating the granulations if they be too indolent. In fact, the truth about fistulæ after operation is that the more carefully and often you dress them the more they refuse to get well. John Hunter, I think it was, who has left us a most precious legacy in these words, "Do not dress the sore too curiously."

There are fistulæ which may be spoken of under the head of fistula in ano, although, whether they communicate with the rectum or not, they have really nothing to do with what is commonly understood by fistula in ano. Clearly to understand about these, we shall have to go over the anatomy of the perineum. You all know about the famous deep layer of the superficial perineal fascia. Now, passing in front of the perineal muscles, it turns under the transversus perinei and becomes attached to the deep perineal fascia or triangular ligament. If you hold a pocket pistol by the muzzle, the butt pointing downwards, you will gain a good idea of this curving fascia. By its junction with the triangular ligament it makes a closed pocket, or *cul de sac*, the bottom of which is at this junction, the top almost anywhere upwards, at the clavicles if you like, but at present we will limit it at the scrotum. The French call this pocket, which contains the erectores and acceleratores muscles, urethral bulb, &c., "loge périnéale inférieure." The triangular ligament, or deep perineal fascia, is a ligamentous sheet that shuts off and defends the cavity of the pelvis. It is attached above, by its apex, to the symphysis pubis, on each side to the rami of the ischia and pubes. It occupies a space bounded in the same manner above and laterally, below by the transversus perinei. Below the transversus, you remember, are the levatores ani and the ischio-rectal spaces filled with fat. The ligament is composed of two layers, an anterior and posterior, and between the two are contained Cowper's glands, Wilson and Guthrie's muscles, membranous portion of the urethra, bloodvessels, &c. "The anterior layer, where it is perforated by the membranous portion of the urethra, is continuous with the fibrous cover of the bulb and corpus spongiosum urethræ, so that the fascia does not present a defined edge to the tube which passes through it." (Quain's Anatomy.) Abraham Colles, in his Surgical Anatomy, published in 1831, thus writes: "The bulb of the urethra does not lie loose and unconnected on the surface of the ligament. On the contrary, you find it to be fixed in this place, and connected with the anterior surface of this ligament by an attachment of almost ligamentous nature, so that even the largest and most posterior portion of the bulb, although it pass backward toward the anus, cannot be said to lie loose and pendulous in the perineum." I love to hear or see the name of Abraham Colles. If you have not, I would strongly advise your reading his Surgical Lectures and his Surgical Anatomy. The posterior layer of the deep fascia is not, I think, well understood, and anatomists of the same and those of different nations disagree about it. Some consider that the anterior layer of the deep fascia is really the only true triangular ligament, the posterior layer being only the continuation of the pelvic fascia. Let us hear Abraham Colles again: "On the pelvic surface of this ligament, i. e. the triangular, we cannot without further dissection discover the aperture for transmitting the membranous part of the urethra. In fact, this ligament does not merely present itself as a partition placed in the angle of the pubes, separating the pelvis from the perineum and transmitting the membranous part of the urethra through a distinct opening. On the contrary, we remark that this ligament is continued backward along the sides of the membranous part of the urethra and prostate; that it adheres very closely to the surface of this gland, and, consequently, that it serves so to connect these parts to the ossa pubis, that they *must* follow the motions of these bones." Now here we see the truth of what Mr. Hilton told us years ago, that when a man falls or jumps from a great height, alights on his feet and then falls, he at once experiences pain at the pubes, and going to make water finds blood on his shirt, or having passed water if he can, finds the chamber pot full of bloody urine. He has fractured the pubic portion of his pelvis. The membranous urethra must follow the motions of the bones and are thus torn and lacerated. Now let us see whether this posterior layer of the triangular ligament is really only the pelvic fascia or not. Abraham Colles says: "Observe the extent of this fascia; it is seen to line the walls of the pelvis from the sacro-sciatic notch to the edge of the symphysis pubis. It descends from the ilio-pectineal line to about midway in the depth of the pelvis; here it is reflected from the surface of the muscles and applies itself to the prostate gland and bladder, on the body of which it is lost. At the angle of its reflection, this fascia appears particularly strong and white, but becomes more weak and thin as it lines the muscles and covers the bladder. This fascia fixes itself into the edge of each os pubis, on the side of the symphysis, and at a very little height above the lower edge of these bones. This attachment is made by a pointed production of the fascia inserting itself into the bone; and these productions of the fascia, from their form and greater thickness, have obtained the name of the anterior ligaments of the bladder. So completely does this fascia connect the bladder to the walls of the pelvis, that it is not interrupted in the interval between the anterior ligaments. For here we see this fascia passing so far forwards under the symphysis pubis as to form a small recess or pouch capable of receiving the end of the little finger. Now, as this production of the fascia advances so far forwards under the symphysis pubis, it must approach close to the pubic ligament. (Mr. Colles does not here mean by pubic ligament what we understand by that name, but the upper part of the triangular ligament where it is attached to the symphysis pubis.) We shall find, however, that it is separated from it by the interposition of some veins," and he might have added, some cellular tissue. The two layers of the triangular ligament unite below the membranous part of the urethra and join the anal fascia. M. Denonvilliers describes another fascia, the prostato-peritoneal, which, uniting itself to the posterior layer of the triangular ligament, rises upward from the bas fond of the bladder to the inferior face of the peritoneum at the recto-vesical *cul de sac*, which it helps to form by drawing and holding down the serous membrane. Thus we see that the two layers of the triangular ligament, united above and below, separated in the middle, form another pocket or *cul de sac*, "loge périnéale supérieure," holding the membranous part of the urethra, Cowper's glands, Wilson and Guthrie's muscles, &c.

Now to apply all this to fistula in the neighborhood of the anus. M. Richet says:—"In regard to the abscesses that arise in the 'loge périnéale supérieure,' they originate almost always from an inflammation of the prostate, the anterior layer of the triangular ligament opposing an insurmountable barrier, so that they can neither go downwards or forwards. Hence they have no possible escape, except through the posterior layer or by the prostato-peritoneal fascia, or by entering the urethra. Superiorly, the pelvic fascia, very dense, opposes a long resistance. Nevertheless, it can make a route through and invade the sub-peritoneal tissues of the pelvis. Backwards, it would find the prostato-peritoneal fascia of Monsieur Denonvilliers impassable, upwards near the vesiculæ seminales, but insufficient below, where, as I have said, it is reduced to some cellular adherences. Thus hard pressed, one frequently sees the pus glide in front of the rectum, and, following the inclined plane of the anterior layer of the triangular ligament, invade the ischio-rectal fossa, appear upon the sides of the anus, and sometimes open into the rectum.

Now these fistulæ are often mistaken for fistulæ in ano, and are treated like them, to the destruction of the patient. They are to be distinguished by a history of previous stricture of the urethra, or of gonorrhœa, &c.; often by finding an escape of urine as well as pus; by the fistula forming nearer the anterior segment of the anus than rectal fistulæ usually do, sometimes appearing, by a long subcutaneous sinus, far forward in the perinæum, along which a probe goes back to, or even into the anus. As a rule, you should be very slow to operate by cutting on fistulæ in this situation, until you are sure that they are not of this sort. Speaking of fistulæ and their causes, Mr. Hilton says, that "the causes may be divided into constitutional and local; of the local, a communication with the urethra may be mentioned amongst one of the first. This is a complication of the greatest importance to investigate and make out, previous to the performance of an operation. Many cases have come under my notice in which the operation for fistula in ano has failed for want of this precaution being duly attended to. One case came under my care in which a communication of this sort existed—the result of an ulceration in the urethra behind a stricture. The complication had not been suspected, and the perinæum had been divided into the rectum so as to lay open the fistulous track; the consequence was that no union followed, and the patient never retained his fæces afterwards, but by passing a catheter and keeping one constantly in the bladder, the opening in the urethra was closed, and the patient so far recovered. Another case occurred to me last May, where the fistulous opening communicated both with the urethra and rectum. Having made this out, I declined performing any operation, but recommended that he should keep on his back, and that a catheter should be kept constantly in the bladder." Personally, from what I have seen of such cases, if a catheter cannot be regularly passed by the patient every time he desires to micturate, I believe that I would recommend the performance of the lateral operation for lithotomy, as is done in ruptured bladder, and keep the opening patent with a tube long enough to allow the sinus to close.

Progress in Medicine.

REPORT ON PHYSIOLOGY.

By H. P. Bowditch, M.D. Harv.

In presenting the first of a series of reports on the progress of physiology, it seems desirable to indicate briefly the object which will be had in view, as well as the plan to be followed in their preparation.

The necessary limits of time and space will of course render it impossible to give a complete *résumé* of all the work done each year in a science so extensively cultivated as Physiology. Nor is it necessary to do so, for the voluminous annual reports published in Germany* are so complete as to leave nothing to be desired in this direction. These reports give short notices of all the physiological work published during the year in all the languages of Europe, and are invaluable for any one who desires to ascertain the present state of knowledge in regard to any particular point in physiology.

Instead of attempting any such exhaustive treatment of the subject, a certain number of special questions will be selected to be discussed, somewhat critically, in the light thrown upon them by recent investigations. Each report will, therefore, be an attempt to present in a concise form the results arrived at in several of the most important departments of physiology. It is hoped that this course will be in accordance with the best interests of the readers of the Journal.

Absorption of Albumenoid Substances.

Brucke.—Beiträge z. Lehre v. d. Verdanung. Wiener Sitznungsberichte, Bd. 37, 1859. Uber d. Peptontheorien u. d. Auf. sangung d. eiweissartigen Substanzen. Weiner Sitzungsberichte, Bd. 59, 1869.

Diaconow.—Uber d. Verdanung d. Eiweissstoffes in künstl. Magen. u. Pankreassaft. Med.-Chem. Untersuchungen von Hoppe Seyler. Heft. ii., 1867.

Voit und Bauer.—Uber d. Aufsangung im Diets. und dünndarm. Zeitschrift für Biologie, Bd. 5, S. 536.

Fick.—Uber die Schieksall d. Peptone im Blute. Pflüger's Archiv, v. 40.

Eichhorst.—Uber die Resorption d. Albuminate im Dietsdarm. Pfluger's Archiv, iv. 571.

Since the discovery of the power of the gastric juice to convert albumenoid substances into so-called peptones, a form in which they are much more diffusible than the albumens from which they are derived, it has been assumed by nearly all physiologists that a change of this sort is a necessary preliminary to absorption, and that unchanged coagulable albumen cannot pass the mucous membrane of the alimentary canal. Prof. Brücke, of Vienna, however, very early called attention to the length of time necessary for the conversion of albuminoid substances into peptones, and expressed the opinion that food does not stay long enough in the stomach for the conversion of more than a very small portion of the albumens contained in it. Moreover, the presence of coagulable albumen in the small intestine may be demonstrated. Brücke also alludes to the existence in the pancreatic juice of an albuminoid substance, coagulable by heat, which plays an important part in emulsifying fats. It can scarcely be supposed that the channels which are wide enough to allow the passage of fat drops are impervious to albuminous molecules which serve to emulsify the fat; and if the albumen of the pancreatic juice can be absorbed, there is no reason why the albumen of the food should not be absorbed also.

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* Bericht über die Fortschritte der Anatomie und Physiologie von Henle, Meissner und Grenacher in Göttingen.

Jahresbericht über die Leistuugen und Fortschritte in der Anatomie und Physiologie von Rud. Virchow und Aug. Hirsch, unter special-redaction von Dr. E. Gurlt und Dr. A. Hirsch.

Diaconow calls attention to the small amount of peptones found in the blood and the intestines, and considers that physiologists are not justified in assuming them to be the only albuminoid substances which are in a form to be appropriated by the organism.

That coagulable albumen can really pass through an animal membrane is sufficiently proved by the occurrence of albuminuria after the injection of white of egg into the veins, the difference between albumen and peptones in regard to diffusibility being one of degree only.

The experiments of Voit and Bauer, and of Eichhorst, consisted in the injection of various albuminoid substances into the rectum of dogs, and determining the amount of nitrogen excreted in the urine and fæces. For this purpose the animals were, in Voit's experiments, kept for several days entirely without food, until the daily elimination of nitrogen had become constant. In Eichhorst's experiments, they were fed on non-nitrogenous food till the same result was obtained. An injection of an albuminoid substance was then made, and any increase in the elimination of nitrogen was considered a proof that absorption through the large intestine had taken place. In order to exclude the hypothesis that anything like digestion could take place in the rectum, the fluids of the large and small intestine were carefully tested in regard to their action on albuminoid substances, and were found to possess no digestive power whatever. The experiments showed that the following substances were absorbed through the mucous membrane of the large intestine: juices of meat, milk, solution of myosin, white of egg mixed with salt, solution of gelatine and Liebig's meat extract. On the other hand, simple white of egg, solution of syntonin and blood serum were not thus absorbed. The juice of meat was found to be quite as easily absorbed as peptones, which is an additional proof that no digestion occurs in the large intestine.

Relying upon these experiments, Voit expresses the opinion that only the albumen, which is absorbed unchanged, is used for the repair of organs and tissues, and that the peptones which are absorbed are probably rapidly decomposed. Otherwise we must suppose that the peptones derived from the albumens of the food are converted, after absorption, into the albumens of the body, a process not in accordance with the economy of force which we see usually manifested by Nature.

Fick adopts the same view, and supports it by the following experiment. Albumens and peptones are injected into the jugular vein of rabbits whose kidneys have been extirpated, and at different intervals the blood is examined for urea. The injection of albumens is not followed by any important increase of urea in the blood, while the peptones cause a very marked increase, which is proportional to the time elapsing between the injection and the examination of the blood.

Nutritive Enemata.

Leube.—Ueber die Ernährung der Kranken vom Mastdarm aus. Deut. Arch. für Klin. Med. Bd. x. S. 1–54.

Leube.—Ueber die Anwendung des Pancreas-glycerinextractes zur Ernährung der Kranken vom Mastdarm aus.

The experiments described above prove the possibility of nourishing the body by nutritive enemata even when no digestion can be supposed to take place in the rectum. The results will, of course, be much more certain when such a digestion does occur, and this Leube proposes to effect by mixing with the enemata a small amount of the glycerine extract of the pancreas prepared according to the method of von Wittich (*Pflüger's Archiv*, ii. 193). The glycerine extract of the gastric mucous membrane would probably be quite as effective.

Digestion of Starchy Substances.

Meyer.—Ernährungsversuche mit Brod am Hund und Menschen. Zeitschrift für Biologie, vii. p. 1.

Sonsino.—On the Physiological Dyspepsia for starchy Food in Infancy. Practitioner, li. 155.

Schenk.—Uber die Vertheilung des Klebers in Weizenkorne Anatomische Untersuchungen, Wien, 1872.

The relative nutritive value of bread of different sorts has been investigated experimentally by Meyer. The experiments were made on a young man of strong and healthy constitution, and the bread used was of four different sorts.

I. Rye bread (without bran) prepared by the Horsford-Liebig process.

II. Munich rye bread made from bolted rye meal, with the addition of coarse wheat flour, raised with leaven.

III. White wheat bread raised with yeast.

IV. North German black bread (Pumpernickel), made from coarse, unbolted rye meal, raised with leaven.

Each sort of bread was used as food for four consecutive days, being, with the exception of a daily allowance of 50 grammes of butter and two litres of beer, the only food taken during that time.

Between each series of days, thus devoted to experiment, several days or weeks intervened, during which the individual regulated his diet according to his inclinations.

The solid constituents, the nitrogen and the mineral substances, were determined quantitatively for each sort of bread. A similar analysis of the fæces gave the means of determining what proportion of each of these substances was absorbed. The following table gives for each of the four sorts of bread the amount of these substances which appeared in the fæces for every 100 parts swallowed:

Bread.	Solid constituents.	Nitrogen.	Mineral substances.
I.	11·5	32·4	38·1
II.	10·1	22·2	30·5
III.	5·6	19·9	30·2
IV.	19·3	42.3	96·6

It appears, then, that the bread which furnishes the greatest amount of nutritive materials in a condition to be absorbed is that made of fine wheat flour, and that which furnishes the least is that made of coarse, unbolted rye meal. This result is in direct contradiction to the prevailing views as to the nutritive value of unbolted flour. These views are based partly upon the fact that the feeling of hunger is relieved for a longer time by bran bread than by bread made of fine white flour. The greater and more prolonged distention of the stomach by the former in consequence of its comparative indigestibility is probably the explanation of this feeling. For not only must bran bread be swallowed in greater quantity than white bread in order to obtain an equal amount of nutriment, but it will also remain longer in the stomach because it is less easily acted upon by the digestive fluids.

The superiority of bran bread, as a means of nourishment, was also apparently demonstrated by the experiments of Magendie, who found that a dog fed on white wheat bread died of starvation in fifty days, while another dog fed on black bran bread lived for a long time. In the absence, however, of any statement as to the absolute amount of bread swallowed, this experiment is of no value, for it is quite possible that owing to the less agreeable taste of the white bread the animal did not swallow enough to sustain life.

Besides establishing the nutritive inferiority of bran bread, the experiments of Meyer prove, also, that the large amount of mineral substances present in bread made by the Horsford-Liebig process does not cause the absorption of any greater amount of nutriment. In this respect the previous experiments of Bischoff and Hofmann are confirmed.

The observations of Schenk, on the distribution of gluten in wheat, threw some additional light on the question of the nutritive value of bran. It was observed that, when a transverse section of a kernel of wheat was heated with Millon's reagent, the color characteristic of the presence of albuminoid substances appeared over the whole surface, except in the layer of granular cells, commonly known as gluten cells, lying immediately under the cellulose envelope. Now, since no albuminoid substance is known which is not colored by Millon's reagent, and since gluten obtained from flour shows the characteristic color, it is evident that the so-called gluten cells must be really destitute of gluten. The same result was obtained by subjecting the sections of wheat to the action of a digestive fluid. Here the so-called gluten cells were entirely unaffected, while the starch granules in the interior of the kernel were set free by the solution of the albuminoid framework about them. Although the gluten cells themselves seem to contain no albuminoid substance as tested by Millon's reagent, yet in the central portion of the kernel the albuminoid substances increase from within outwards so that it is still possible that the removal of the bran may involve the loss of some of the most nutritive portions of the flour. It is also probable that the gluten cells, though containing no albuminoid substance, yet really do contain some indigestible nitrogenous material. This would explain the large amount of nitrogen found in bran. This view is also supported by an experiment of Poggiale,* who found that bran passed successively twice through the intestines of a dog and once through that of a cock still contained 3.5 per cent. of nitrogenous substances.

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* Comptes Rendus, 1853, t. 37.

In view of these facts, it is impossible to look upon *all* the nitrogen found in the fæces after a diet of bran bread as derived from digestible albuminoid substances, though, undoubtedly, much of it has this origin, the nutritious substances being carried through the alimentary too rapidly to be wholly digested and absorbed.

Sonsino calls attention to the fact that in an infant the alimentary canal resembles anatomically that of a carnivorous animal, this structure being in accordance with the character of the food on which it lives. Thus the mouth is adapted only for suction and not for mastication. The lips, tongue, pharynx, uvula and soft palate are well developed, while the jaws are small and without teeth till a later period than in any other mammal. The stomach is small and tubular, lying more parallel to the trunk than in adults, the pancreas slightly developed and the small intestine short. These are all indications that the food will stay only a short time in the alimentary canal, and and therefore animal rather than vegetable food should be given. The presence of starch being the principal characteristic of vegetable food, it might naturally be supposed that starch would not be well digested by infants. This view is confirmed by the observations of Guillot, who found in the autopsy of infants a jelly-like substance in the intestines, giving a starch reaction with iodine. Bidder and Schmidt found that the saliva of young animals, man included, has little or no power to change starch into sugar. Schiff confirmed their observations and placed the first appearance of the sugar ferment of the saliva at the period of the first dentition.

Sonsino's experiments showed that an infusion of the pancreas of young cats, dogs and rabbits, has no sugar ferment, though in adult animals the action is very marked. He concludes that "in the early life of man, probably till the beginning of dentition, infants offer a true physiological dyspepsia for starchy aliments, caused by the inactivity of one at least—probably of all—of the humors that concur in the digestion of those aliments."

Hence rice, arrowroot, tapioca, &c. are unsuitable articles of food for infants unless mixed with some substance capable of acting as a sugar ferment. For this purpose the author suggests the use of the glycerine extract of bullock's pancreas.

It is interesting in this connection to notice the custom, said to prevail amongst the peasant women in certain parts of Southern Europe, of moistening the pap in their own mouths before giving it to their children, thus by their own saliva effecting a chemical change which that of their infants would be powerless to produce.

Sonsino concludes with some remarks upon the inability of starchy food to furnish materials for building up the tissues of the body, which is, of course, a very important process in growing children.

ORIGIN OF ANIMAL FAT.

SUBBOTIN.—Beiträge zur Physiologie des Fettgewebes. Zeitschrift für Biologie, vi. p. 73.

HOFMANN.—Der Uebergang von Nahrungsfett in die Zellen des Thierkörpers. Zeitschrift für Biologie, vii. p. 153.

TOLDT.—Beiträge zur Histologie und Physiologie des Fettgewebes. Wiener Sitzungsberichte, Bd. lxii., 1870.

Radziejewski.—Experimentelle Beiträge zur Fettresorption. Virchow's Archiv, Bd. 43, p. 268.

Voit.—Ueber die Fettbildung im Thierkörper. Zeitschrift für Biologie, Bd. v. p. 79.

The question of the origin of animal fat is of great importance as bearing upon the practical problems of increasing by suitable diet the amount of adipose tissue in the body, as in the case of convalescents, and of diminishing the amount of the same tissue in the cases of obesity.

The fact that fat may arise as a product of decomposition of albumenoid substances, has been proved in many ways, but never more satisfactorily than by the following experiments of Hofmann on maggots. The amount of fat contained in the eggs of flies was determined by an analysis of a given number of them. Other eggs were allowed to hatch and develop, the maggots being fed on defibrinated blood. The full-grown maggots were then analyzed, and found to contain about ten times as much fat as the eggs and the food together. The possibility that fat may arise in this way, led to the theory that all the fat in the cells of the body is derived from the decomposition of albumenoid substances in the cells themselves, the nitrogenous products of decomposition passing out by digestion, while the fats remain behind, until, by further decomposition, they assume more soluble forms. On this theory, the fat of the food contributes only indirectly to the deposition of fat in the body by protecting the fat which arises from the albumenoid substances from farther decomposition, and, since the blood never contains any great amount of fat, the fat of the food must be used up as fast as absorbed. This theory is held by Subbotin, who supports it by the following experiments.

I. A dog received daily for a month a certain amount of spermaceti with his food, and an examination of the fæces showed that during the month he must have absorbed at least 100 grammes of that substance. An examination of the tissues showed only a very small amount of spermaceti in the omentum and mesentery, and none at all in the subcutaneous adipose tissue. Subbotin concludes, therefore, that the fat of the body is derived only in a very slight degree from the fat of the food.

II. Emaciated dogs were fattened on food from which one of the normal constituents of animal fat, viz. stearine, had been extracted. The fat in the body, however, contained a normal amount of stearine. This, Subbotin concludes, must have been formed by the decomposition of albumenoid substances.

Similar views are held by Toldt.

According to theory of Radziejewski, fats arise synthetically in the cells, from the soaps formed in the intestine by means of the pancreatic juice and the bile salts acting on the fat of the food. His experiments, however, scarcely sustain his conclusions, and need not therefore be mentioned.

Hofmann denies the force of Subbotin's experiments with spermaceti, because this is a fat abnormal to the body of the animal experimented on, and offers the following experiment to prove that the normal fats of the food may be absorbed as such from the intestines and deposited directly in the tissues.

A dog was kept without food till a sudden increase in the daily excretion of urea was observed. This, according to the researches of Voit, is an indication that all the fat of the body has been used up. The animal was then fed for five days with large quantities of fat and a small amount of fresh meat. An analysis of the fæces during these five days showed how much of these substances had been absorbed. At the end of the five days the dog was killed, and the total amount of fat contained in the body determined. This fat must have been derived from the decomposition of the albuminoid substances or directly from the fat of the food. The amount of fat which could have arisen from the decomposition of albuminoid materials was calculated on the assumption of Henneberg that 100 grains of dry albumen give rise to 51·4 grains of fat. The following table gives the result of the experiment.

	In five days. Grammes.
Fat absorbed as food	1854·0
" arising from albumen	130·7
" supplied to the body	1984·7
" found in the body	1352·7
" decomposed	632·0

It will be seen that the amount of fat found in the body was ten times as great as could be accounted for, even on the supposition that all the albumens of the food had been changed into fat, proving that the fat of the food must have been deposited directly in the tissues, notwithstanding the difficulty of supposing fat drops to pass through moist animal membranes.

Voit has shown, in experiments made first in 1862, that a dog fed entirely on lean meat excretes in urea all the nitrogen of the meat, but that a portion of the carbon remains behind in the body. This can best be accounted for on the supposition that fat is formed by the decomposition of albumen, and is stored up as such in the body.

In the present state of the question, the most reasonable conclusion seems to be that the fat of the animal body may be, and probably is, formed both from the albuminoid and fatty substances in the food. Whether starchy and saccharine substances can give rise to fats is still an open question.

[To be concluded.]

Reports of Medical Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. F. B. GREENOUGH, M.D., SEC.

Nov. 25th.—*Malignant Sarcoma of Cutis, Vertebral Column, Rib, Lungs, Liver, Pancreas, Kidneys, Heart and Dura Mater.* Dr. WEBBER reported the case (which had been under Dr. Lyman's care) and showed the specimen.

Peter W., aged 40, bookbinder, was sent to Dr. Lyman by his employer, Nov. 5th, suffering from dyspnœa and pain through left side, shoulder and arm. His father died of tumor of stomach, since ascertained to have been cancer. Had rheumatic fever sixteen years ago, after which his health was good till five years ago, when a tumor appeared in the right axilla, which was removed in 1869. It soon re-appeared, and, in August, 1871, it was removed at the Massachusetts General Hospital. Six months since, small tumors began to appear over the body, of which there are at present a large number, varying in size from a pea to a pigeon's egg, resembling somewhat sebaceous cysts, some in the skin, others deeper seated; three of the subcutaneous ones are dark, grumous and bloody. Large nodular mass over seventh right rib, outside of angle. Has severe paroxysms of cough morning and evening, with little or no expectoration. Complains of lancinating, burning pain in left side, shoulder and arm, with severe exacerbations several times during the day. Cardiac region and arm feeling sore and burning like fire. No pain elsewhere. Able to move about. Pulse 104. Appetite good. Bowels constipated. Respiration short, and much impeded on least exertion. Dry musical râles throughout both lungs.

Eight years since had urethritis, the discharge continuing five or six months. No sore or swelling of glands in groin.

Children healthy, with no evidence of venereal taint.

Urine—specific gravity 1020; nothing abnormal except crystals of oxalate of lime.

Admitted to City Hospital Nov. 8th.

Nov. 9th.—The disease until now has been considered to be malignant. On consultation, gummous tumor was suggested.

17th.—The original diagnosis was again adopted.

20th.—Pain in chest and arm much aggravated, and respiration more labored, causing great suffering. Objects to food; thinks it increases the dyspnœa.

21st.—Called for a glass of water, and on the return of the attendant had ceased to breathe.

Post mortem, by Dr. Webber.—Extensive adhesions in each pleura, mostly in front. Pericardium adherent, but easily separated. A large mass was found at the apex of left pleural cavity, attached to vertebral column, and several smaller masses attached to bodies of vertebræ. On one of the ribs, a small tumor, which had destroyed the bone. Liver, lungs, pancreas, kidneys and substance of heart studded with nodules, and upon the under surface of the dura mater, near the vertex and to right of median line, was attached a similar mass, size of a penny.

Microscope shows the disease to have been malignant sarcoma.

Dr. WHITE spoke of a case of primary sarcoma of the skin over the groin, which had been examined by Dr. Fitz, and found to be undoubtedly sarcomatous.

Dr. LYMAN said that the case had been a very interesting one with regard to the diagnosis, and asked Dr. Fitz what he had found microscopically.

Dr. FITZ stated that the results of his microscopical examinations agreed essentially with those of Dr. Webber, and that there could be no mistake as to the character of the growth. He would add that the resemblance between the large spindle cells of the tumor and those of involuntary muscular tissue was very striking; the same was true with regard to the fasciculated arrangement. He had also examined the tumor referred to by Dr. White, and found a similar structure, the cells being smaller, however, the nuclei broader and less elongated.

In Dr. Lyman's case, the rapid and extensive generalization after the second operation was of interest, a period of comparative immunity, except locally, existing between the two operations.

In the second case, where the tumor was apparently primary on the skin, the disease was most extensive in the deeper layers of the corium; hair follicles, sweat-glands and adipose tissue, still to be recognized, though the two latter were undergoing atrophy.

The papillary layer directly over the nodules was atrophied, the growth making its way into the individual papillæ. Accessory nodules, few in number, were apparent, also a limited, diffuse infiltration of the corium.

In answer to a question by Dr. Damon, he said that there were, undoubtedly, cases where a differential diagnosis between sarcoma and gumma was extremely difficult, perhaps impossible, as in certain forms of cerebral tumors. In this case, however, the spindle-cell formation was so prominent, the individual elements so large and free from degeneration, this notwithstanding the size of the nodules, and the structure of the growths was so complete, highly organized, if the term might be used, that a reasonable doubt could hardly be entertained. Characteristic of growing gummatous tumors was the peripheral layer of granulation tissue, rapidly terminating in fatty degeneration centrally, indicative of an extremely transitory existence of the individual elements.

With regard to the gross appearance of certain of the cutaneous tumors, there were undoubtedly some which bore a marked resemblance to gummatous nodules. But in the older tumors, elevated above the surface, some actually fungoid, dense, and hard, there was no evidence of breaking down. Where the skin was giving way, it did so from above, the epithelium exfoliating and leaving a delicate, smooth, shining, translucent pellicle, of bluish-red color, covering the tumor.

Dr. **Blake** exhibited a specimen of a Politzer's eyelet which had come away under peculiar circumstances three months after its insertion in the membrana tympani. Politzer's operation for insertion of the eyelet consists in making a straight incision through the membrana tympani in the posterior inferior segment, then dilating this by means of a sea-tangle tent, a process which occupies from ten to fifteen minutes and is very painful, and on removal of the tent inserting the eyelet by means of forceps constructed for the purpose. As a modification of this operation, instead of one cut, two cuts are made in the posterior inferior segment of the flap with its apex upwards; this flap is then pushed inwards by means of a probe and the eyelet introduced immediately upon the flap. The tendency of the flap to spring outwards presses the eyelet firmly upwards against the free edges of the incision, and holds it in position until intention has taken place. The operation requires but a comparatively short time, and the danger of the passage of the eyelet into the cavity of the tympanum is diminished as the tendency of the flap is always to press it outwards. Whatever may be the method of introduction, the limit of permanency of the eyelet seldom exceeds three months, at the end of that time it generally comes away and another must be introduced. Recent experience shows, however, that the third and fourth operations are seldom called for, as the hearing after the coming away of the second or third eyelet is sufficiently good; this is especially noticeable in cases of very considerable thickening and rigidity of the membrana tympani. The specimen exhibited was a good instance of the tendency to repair as shown in the membrana tympani, cicatricial tissue having extended from the edges of the cuts a distance of from two to three m.m. inwards over the eyelet and completely occluding the inner end of the eye.

This operation is indicated when the labyrinth is intact, but the membrana tympani is so thickened as not to transmit sonorous vibrations.

Boston Medical and Surgical Journal.

Boston: Thursday, January 16, 1873.

The indications of energetic action on the part of Mayor Pierce are encouraging. His letter to the physicians in regard to the smallpox hospital shows an inclination to be guided by good medical authority, a marked contrast to the policy of the late administration. We are sorry to hear that the Board of Aldermen have not adopted his suggestion in regard to the Roxbury Almshouse. It is well known that the danger of communicating the disease from a smallpox hospital to its neighborhood is imaginary, and we regret to see that the policy which led the old Board of Health to abandon the Albany Street hospital is still influencing the minds of the majority of the present board of aldermen. We confess to a feeling of disappointment at the announcement of the nominations for the new board handed in last week. The selection of more prominent men would seem to be highly desirable for the success of the board, particularly at the outset of its career. We presume, however, it was difficult to find such men who were willing to accept the positions with the present salary and conditions.

The accounts of the last illness of Napoleon, and the bulletins issued by his medical attendants, are vague and conflicting. We presume that lithotrity had been performed and the operation repeated after a short interval, with a fatal result, the exact nature of which we have not learned from any reliable source. There are rumors of death from chloroform, which have not yet been confirmed. If this report proves to be true, it will be interesting to read the comments of the English medical press.

The following propositions are offered as matters of belief, and some of them as matters of record:—

1st. Without vaccination, one death in ten would be the result of smallpox.

2d. Without vaccination, nineteen out of twenty would have smallpox.

3d. Without vaccination, sixty-seven per cent. of the cases of smallpox would be fatal.

4th. With vaccination, not two per cent. of the inhabitants will take smallpox.

5th. With vaccination, the percentage of deaths from smallpox is only about eight of the two per cent. who will take it.

6th. A larger percentage of those who have had smallpox will have the secondary disease than of those who have been vaccinated. That is to say, vaccinia is a better prevention of varioloid than smallpox is.

7th. Humanized virus is more likely to take than the original virus from the cow.

8th. Humanized virus, whether it takes or not, does not produce such severe constitutional symptoms as primary cow virus does.

9th. It is not proved that either humanized virus or primary cow virus is the better in its protective effects.

10th. There are certain individuals who do not seem susceptible of variola.

11th. There are certain individuals who do not seem susceptible of vaccination.

12th. The taking of smallpox after vaccination is no proof that a second vaccination would have succeeded.

13th. A successful re-vaccination is no proof that the individual re-vaccinated would have taken smallpox.

Fig Leaves.—According to the *Lancet*, there may be observed in the Indian collection at the International Exhibition, in a case of personal ornaments placed against the wall near the south-eastern angle of the court, a pair of silver leaves exactly copied ftom the oval leaves of the Indian fig tree. In the same and in other cases will be found a variety of metal ornaments of the conventional heart shape, and others of the ecclesiastical piscina, attached to some form of cincture or girdle. All these variations of the leaf-form are used by the Hindoo girls to cover the vulva, and not seldom as their sole article of attire; while the heart and piscina forms are merely conventional copies of the original. This relation between the conventional heart shape and the female sexual organs possibly explains the first use of the former as a symbol of love; and it may also be assumed that the piscina was a heathen emblem, a relic of the phallic worship of some far-back Aryan stock, before it was adopted as a Christian one. The young ladies who purchase valentines, and the architects who copy mediæval decorations, have been about equally ignorant of the meaning of the forms they have assisted to perpetuate.

The modern jewelry collection contains also objects of sanitary interest, in the shape of the thumb rings, furnished with mirrors, which are worn by Hindoo women. These rings are used for the examination of the genitals, in order to be sure that they are cleansed effectually.

Medical Miscellany.

THE BOARD OF TRIAL of the Massachusetts Medical Society met in this city, yesterday, Jan. 15th, pursuant to adjournment, and pending the decision of the Supreme Court with regard to the injunction served upon their proceedings, adjourned to April 29th. There is reason to believe that the decision of the Supreme Court will shortly be rendered.

THE INTRODUCTORY LECTURE at the beginning of the term of the Medical School of Maine was delivered by Dr. Thomas Dwight, on the 9th inst. The subject was the Progress of Anatomy and the Anatomy of Progress.

PROF. GAETANO VALERJ, M.D., of Rome (Hon. Member of the Massachusetts Medical Society), has been made a "*cavaliere*" of the Crown of Italy for his distinguished services in the University at Rome.

THE SMALLPOX.—The report of the city physician of Boston for the three months ending Dec. 31st ult. will show that 1793 cases of smallpox have been reported in that time. The number of deaths by the disease was 523; and the number of patients in the city and at the island at this date is estimated to be 650. The ratio of deaths to cases reported has been a trifle above one in three.

COLLODION IN HERPES ZOSTER.—Dr. W. M. Carpenter recommends in the *Medical Record* the use of collodion, applied to the vesicles, for the relief of the intense, burning, superficial pain of this affection.

BONE-SETTING EXTRAORDINARY.—The marriage of the Emperor of China has been described by a contemporary with a minuteness that is either highly creditable to the imagination of the correspondent or else is a convincing proof that the Celestials have overcome the objections they once entertained to allowing foreign barbarians to penetrate to the customs of Chinese domestic life. In the story there is one painful episode of a hunch-backed girl who was among the forty or fifty first selected candidates. The Emperor had dreamed that he was to marry a hunch-back, and medical men were consulted in regard to the possibility of curing the deformity. "After some vain efforts, it is said that a farrier, a very strong man, tried by force alone to push in the hump, and that it ended in the death of the poor girl" This must have been a bolder stroke in the way of bone setting than any that English members of the craft have even attempted to achieve, and it is manifestly to be wished that Chinese farriers could be taught something of the way in which "cure by movement" may be effected.

SENNA-COFFEE.—It may not be generally known that the disagreeable taste of infusion of senna may be completely removed by the addition of coffee in its preparation.

For a full dose, take a teacupful (say 1 oz.) of senna leaves, a heaped teaspoonful (say 2 drachms) of freshly parched and ground coffee, and boiling water a sufficient quantity to make a teacupful (say four fluid ounces) of infusion—steep till of sufficient strength.

To the infusion thus prepared, add milk and sugar to taste. The drink will be quite acceptable to adults, and not disagreeable to children.

THE IMPERIAL CALCULUS.—What historian of France will undertake to determine how important an influence the calculus in Napoleon's bladder exerted in the downfall of Napoleon's dynasty—to what extent the pain and annoyance and anxiety, caused by that stony interloper, distracted the imperial attention from the "one idea" and intruded themselves into national affairs?

Fracture of the Trachea.—Dr. Drummond, of Oldham, England, reports the case in the *British Medical Journal.* A middle-aged woman, while hanging out some clothes, slipped off the chair on which she was standing and fell forward against its back, from which the top rail was missing. She fell forcibly and struck the trachea against a sharp, upright spindle. The cartilaginous rings were crushed; there was slight expectoration and extreme general emphysema. A compress of cotton wool was retained over the part by adhesive plaster, and she made a good recovery in ten days.

A Remarkable Case—A Young Man without any Liver, Stomach, and other Essentials (from the Pottstown, Pa. *Ledger).*—"A very unusual and wonderful phenomenon was found within the body of William Millaur, of Cedarville, North Coventry township, Chester County, who died on Monday morning, Dec. 9. The deceased has been afflicted for several years with curvature of the spine, enlarged spleen and liver. Ascites, or abdominal dropsy, set in about eight months ago, as the result of the enlargement of the liver and spleen interfering with the proper functions of the body, gradually increasing until his death.

"The case was under charge of several physicians of this vicinity, since he was first afflicted. Dr. J. Davis, who has been his attending physician for several months past, performed a post-mortem examination on Wednesday last, in the presence of several persons, and, strange to relate, after having drawn about eight gallons of dark-colored serous fluid from the abdomen, found that the liver, spleen, kidneys, stomach and bowels were completely absorbed, without leaving any portion of them remaining—nothing being found in the abdomen but a portion of the omentum and the serous fluid. How long this had been the case we are unable to say, but certainly it could not have been long."—*Med. Times.*

Books Received.—Pharmacopœia of the United States. Fifth Decennial Revision. Philadelphia: J. B Lippincott & Co. Pp. 383. (From the Publishers.)

Pamphlets Received.—Rhode Island Nineteenth Registration Report for 1871. By Edward T. Caswell, M.D. Providence, R. I. 1872. Pp. 116.—Seventeenth Annual Report of the Trustees of the State Lunatic Hospital at Northampton. October, 1872. Boston. 1873. Pp. 138.

Married,—At Meriden, N. H., Jan. 7th, Assistant Surgeon F. Le Baron Munroe, U. S. Army, to Tamson, daughter of Mr. I. I. Barrows, of Meriden.

Mortality in Massachusetts.—*Deaths in fifteen Cities and Towns for the week ending January* 4, 1873.

Boston, 204—Charlestown, 18—Worcester, 24—Lowell, 9—Milford, 6—Chelsea, 11—Salem, 7—Springfield, 6—Lynn, 12—Gloucester, 3—Fitchburg, 5—Taunton, 6—Newburyport, 5—Somerville, 8—Haverhill, 5. Total, 329.

Prevalent Diseases.—Smallpox, 70—consumption, 68—pneumonia, 19—scarlet fever, 15—typhoid fever, 12.

The deaths from smallpox were as follows: In Boston sixty, Charlestown five, Salem two, Chelsea two and Worcester one.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, January 11th, 207. Males, 110; females, 97. Accident, 4—abscess, 1—apoplexy, 3—aneurism, 1—asphyxia, 1—asthma, 1—inflammation of the bowels, 1—bronchitis, 5—inflammation of the brain, 2—congestion of the brain, 3—disease of brain, 6—cancer, 5—cyanosis, 2—consumption, 32—convulsions, 4—croup, 2—debility, 3—diarrhœa, 1—dropsy, 1—dropsy of brain, 1—diphtheria, 1—erysipelas, 1—scarlet fever, 8—typhoid fever, 2—gangrene, 1—gastritis, 1—disease of heart, 3—intemperance, 1—disease of kidneys, 3—disease of the liver, 2—congestion of the lungs, 1—inflammation of the lungs, 11—marasmus, 3—old age, 5—paralysis, 7—premature birth, 5—puerperal disease, 2—parotitis, 1—pyæmia, 2—rheumatism, 1—smallpox, 56—malignant disease of stomach, 1—spina bifida, 1—tonsillitis, 1—teething, 1—ulcers, 2—unknown, 4.

Under 5 years of age, 58—between 5 and 20 years, 24—between 20 and 40 years, 74—between 40 and 60 years, 29—over 60 years, 22. Born in the United States, 116—Ireland, 57—other places, 34.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

CYNO-PHRENOLOGY.

By Burt G. Wilder, M.D. Harv.

Professor of Comparative Anatomy at Cornell University.

[This paper is an extract from a report lately made to Professor Agassiz respecting a collection of brains and embryos which was formed by me under his general direction during the past year, and deposited last summer in the Museum of Comparative Zoology, at Cambridge.

As this collection is only one of the results of Prof. Agassiz' repeatedly expressed intention to devote some of the Museum resources to illustrating the structure and particularly the development of domesticated animals, and as many of the specimens may aid in the study of human anatomy and embryology, a few words are added here respecting the nature and extent of the collection.

Of the 600 specimens, 300 are embryos or parts of embryos, 150 are brains, and 150 are viscera, these latter being mainly dry inflated preparations. Thirty-four different species are represented, but most of the specimens are from domesticated quadrupeds. Of the 300 embryos, 200 are pigs, obtained mainly from the establishment of Messrs. Squires & Co., East Cambridge, where facilities were kindly given during a fortnight, for an examination of all gravid uteri from the 500 to 1000 hogs daily slaughtered there. This series represents about 100 stages of fœtal development, both sexes being usually represented. Upon the catalogue are given weights and measurements upon the metrical system, with brief descriptions of the condition of the various organs, all these observations being made in the fresh state unless otherwise stated. Of the brains, 30 are of cats, 14 of dogs, 24 of swine and 19 of cattle. Many of these, and of those from species not mentioned, are fœtal brains; in all cases their weights are given, together with that of the animal itself, when known.

The peculiarity of the collection and chief source of its value for study, is due to the fact that a large number of specimens has been derived from comparatively *few individuals*, and that many of these latter were of the *same family*; since upon the catalogue are given cross-references to other preparations from the same individual, and to those from other individuals of the same family; thus enabling us to ascertain the extent of correlative variation and to discriminate better between variations which are due to age, sex, breed and individual, respectively.]

MIND AND BRAIN.

Leaving out of view the spiritual distinction between men and animals, and referring here only to the propensities and faculties common to both, it is generally admitted that some kind of correlation exists between these and the brain.

By some (the phrenologists), this correlation is held to be minute and special, each part of the brain being large or small according to the vigor of the propensity or faculty which is manifested through it. By most physiologists, however, this view is regarded as unproved; and the only really scientific basis upon which to expect that it can ever be proved, is embraced in the guarded admission of a recent writer* that "there is no point in the physiology of the brain more exactly determined than that the faculty of speech is located in a well defined and restricted portion of the anterior lobes," which in the large majority of cases appears to be upon the left side only.

But whichever view we adopt, some more satisfactory tests than have hitherto been employed are required in order to explain the contradictions which arise when we contrast the brains and the intellectual manifestations of dogs and sheep, horses and pigs, monkeys and cats.

For we find that:

1. Mere *absolute size* is not a sufficient index, since the sheep and cow excel the dog and monkey in this respect, and the elephant and whale surpass all other mammalia, including man.

2. *Relative size*, also, fails in many cases; as in comparing birds and the lower monkeys with man himself, and all young animals with adults.

3. Although the number and complexity of the cerebral fissures may to a certain extent indicate the area of the gray, or ganglionic tissue which is generally conceded to be the dynamic constituent of the nervous system, yet in this respect sheep and horses go beyond dogs, and cats beyond the lower monkeys.

4. Finally, if we assume that the true test is the actual *amount* of the ganglionic tissue, it must be borne in mind that no measurements of this have been made in animals, and that to do it involves a careful observation of the length of the various fissures, and measurements of their depth, and of the thickness of the layer, which can only be done upon sections of the brain.†

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* Flint: Nervous System, p. 350; yet some natural inferences from even the generally accepted conclusion, are questioned by Dr. Cleland, in a most suggestive paper on "The physical relations of consciousness and the seat of sensation—a theory proposed." *Journ. of Anat. and Physiology*, Nov. 1870, p. 109.

† See Quain's Anatomy, vol. ii., for an abstract of the result of Wagner's measurements of three human brains.

5. Yet even then it may appear that considerable allowance must be made for the difference in the *quality* of two brains, as has to be done in comparing a small but compact and vigorous muscle with a large but flabby and weak one.

In view of these doubts and contingencies, how inaccurate and fallacious are the methods hitherto employed for basing an estimate of character upon anything but the *brain itself subjected to a searching examination.* Even the surface of the brain cannot be fully seen until the pia mater is removed, which with its vessels, fills up the shallows and bridges over some of the fissures, even, as in the deer, the median fissure; still less correctly can the contour of the brain be determined from the inner surface of the cranium; and, *a fortiori,* still less and with many mammals not at all, from the outer surface, with its elevations and depressions for the attachment of horns and muscles, and its wholesale uplifting to conceal large sinuses. Yet upon these methods are erected the systems of phrenology, and the more laborious and scientific, though scarcely less fallacious science of cranioscopy.

THE FISSURAL PATTERN.

Since it is much easier to describe and compare the fissures (*sulci*) than the folds (*gyri* or *convolutions*) of the cerebrum, and since the former rather than the latter mark the increase in the area of ganglionic tissue, the pattern of *fissuration* will be discussed rather than the pattern of *convolution.*

In spite of lateral, epochal, sexual and individual variations, with perhaps variation in different breeds (all which demand careful study), it is easy to recognize any species which is represented in the collection by its fissural pattern; nor do the specific differences hinder the recognition of homologous fissures within the same genus; nor do generic variations mask the *family* homology; with rather more difficulty the fissures may often be homologized in different families within the order; but between different orders the homology is often so obscure that I believe the only sure criterion is the order and method of appearance of the fissures in the embryo before their normal direction is obscured by secondary fissures and by interference with each other.

Deferring, for the present, the various questions respecting the manner in which fissures are produced, and the value of different criteria (relative position, direction, connection and order of appearance) for determining their homologies, we may safely admit that the fissural pattern has some morphical, or taxonomic or zoological significance.

Nor would this conclusion be invalidated by the extreme assumption that, given a certain cranial capacity and a required amount of ganglionic tissue, the folding would be simply the result of physical conditions, as when cloth is compressed within a limited space; and that the primitive pattern so produced in the primitive ancestors of the various groups is merely perpetuated in descent, with specific and generic variations; in favor of which position, however, there are but two facts: *First*, that the median lobe of the cerebellum is nearly or quite straight in young kittens, but becomes laterally contorted in cats, as if trying to elongate in insufficient space, though even this contortion is wonderfully regular and uniform. *Second*, that as new fissures appear upon the surface of the cerebrum, they seem to subdivide former areas into nearly equal parts.

Now the above considerations do not at all militate against the *zoological* value of the fissured pattern; but they perhaps appear to lessen the probability that this pattern has any such telical or physiological significance as would justify the assignment of particular faculties and propensities to certain folds of the brain.

Of course the present "systems of phrenology" are incomplete so long as they exclude the important folds upon the mesial surface of the brain, which cannot possibly be represented upon the inner or outer aspects of the cranium; and all the objections above brought against the general estimate of mental characteristics from the outer or inner cranial surfaces, or even the surface of the brain before the removal of the pia mater, apply with still greater force to the estimation of the energy of particular faculties upon the same superficial basis.

Moreover, no structural lines of demarcation have ever been found in either the gray or the white nervous substance corresponding with the fissural pattern, much less with the cranial protuberances.

Nevertheless, so long as general and particular mental characteristics are found to coëxist with general and particular modifications of the fissural pattern, and so long as no one has yet made a sufficiently extended investigation to show the presence or absence of concomitant variations according to sex, age, breed and individual character within species, it would seem that the popular conviction, together with the single conclusion respecting the organ of speech in man, should warrant some more careful and extended inquiry than has hitherto been made.

The title of this paper is adopted in order to emphasize my conviction that our real advances in this matter must be made upon the brains of *dogs* rather than of *men* as heretofore, and for the following reason:—

To eliminate doubts and guesses and inferences, it is absolutely necessary to have both the *brain* and the *mind of one aud the same individual.* But unless public sentiment should greatly change, we must hereafter, as heretofore, expect to study carefully the characters of friends and public men whose brains it is *impossible to obtain;* and to examine the contour and structure of brains from paupers and obscure persons whose characters are *wholly unknown* or not worth knowing; while the brains and characters of their relatives are even less likely to be accessible.

On the other hand, with dogs there are breeds pure and mixed, quite comparable with the human race, and with marked physical and mental characteristics; thousands of families cherish and study their canine pets with even more minuteness than their servants or even their acquaintances; their pedigree is carefully noted and their progeny kept sight of; their age is known, and their weight may readily be ascertained. With dogs, therefore, the grand essential condition is fulfilled, since we may have the brain and the mind of the same individual. To this chief advantage may be added many more; for, since, to avoid error, the brains must be kept for actual comparison instead of trusting to figures, the smaller size of the dog's brains will save great expense; some of the methods reported by Dr. Dwight in this JOURNAL for Sept. 5, 1872, might still farther lessen the cost of brain collections; the pattern of fissuration is vastly more simple than in man, and the names of the fissures are agreed upon; the contrast between the dog and its near relatives the wolves and foxes, on the one hand, and the cats on the other, will allow some comparisons which would be impossible with man; the freedom to rear young for scientific purposes, and to obtain near and remote relatives, will allow such a study of the epochal, sexual and individual variations of brains, as would be out of the question with man.

It may at first appear that cats afford even greater advantages than dogs in respect to the small size of the brain, its still simpler fissural pattern and the greater abundance of specimens which could be obtained; but these are only accessory advantages which could not compensate for the lack of the single essential condition, the knowledge of the *character* of the individual. In a few exceptional cases this may be obtained, but the individual mental characteristics do not seem so well marked with cats as with dogs.

Yet some very interesting results may be gained from them, since all of the thirteen adult brains in this collection present individual and lateral variations of the fissural pattern.

WHAT HAS BEEN DONE.

In all works hitherto accessible to me*, the brain of a dog is simply such, no qualification being added, as to breed, sex, age or disposition; yet a glance at the nine adult dogs' brains in the collection show that no two of them are alike, and that while all may be recognized as dogs' brains by the general pattern of fissuration, yet even this presents marked variations, while the form and the size, both relative and absolute, present contrasts which, it seems to me, equal those recorded of human brains.

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* Dr. J. B. S. Jackson informs me that he has seen a French work in which are figured several brains of dogs as well as of other animals; it is supposed to have belonged to the now disbanded Phrenological Society of Boston. I would be greatly obliged for information concerning it, or for the following work, which I know by title only:—Traité de phrénologie humaine et comparée, par Dr. Vimont.

The Pomeranian series of mother and three children of different ages is interesting partly as presenting epochal and individual variations among the latter, chiefly because the older children have more convoluted brains than the mother, indicating a still greater individual or sexual contrast between the mother and the father, who was of of the same breed, and more highly trained than the mother.

Note also the broad and high arched brains of the two English terriers in comparison with the low and narrowed brains of the shepherd dogs, which in that resemble the fox.

Note also that the great difference between the brains of all dogs and that of all cats is in the increase of the space in front of the Sylvian fissure, so as to accommodate an additional fissure, the presylvian, which suggests some connection with the greater power of communicating ideas manifested by the *Canidæ*.

But, evidently, here are only intimations of what may be done for scientific phrenology by employing the brains of dogs, and leaving those of men to be interpreted in the light of the results so obtained.*

"In all departments of investigation it is right to commence with the study of that which is most common, simple and regular, and thence to proceed to inquire respecting that which is unusual and irregular."†

TWO CASES OF DEATH FROM VACCINATION.

By Lyman H. Luce, M.D., Falmouth, Mass.

I.—Mrs. B., aged 62, of a lymphatic temperament, had been subject to erysipelas, according to statement of friends, though she usually enjoyed good health.

Mrs. B. was vaccinated with non-humanized cow-pox virus, Thursday, Jan. 2d, 1873. The next day, Jan. 3d, she rode to a neighboring village, eight miles away, and returned. In the evening, was seized with severe rigors, and pain in arm, which had been uneasy and somewhat swollen during the day.

Jan. 4th.—According to statement of family, the arm was much swollen and very purple.

Jan. 7th.—Her attending physician being ill, I was requested to see her, for the first time. At this date, the arm was intensely inflamed as low down as the middle third of the forearm, the inflammation of a dusky erysipelatous character. In the region of deltoid muscle, the tissues were mortified over a large surface, extending upward nearly to axilla and downward nearly to elbow-joint. Large blisters depended from the under surface of the arm, which, upon being incised, discharged an inky fluid. Pools of the fluid collected in folds of the pillow upon which the arm rested.

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* A more extended discussion of this subject will appear in the Transactions of the American Institute for the current year, 1872–1873.

† Bucknill and Tuke, Manual of Psychological Medicine, 1858; and quoted by Dr. W. Lander Maudsley—The physiology of mind in the lower animals (Journal of Mental Science, April, 1871, p. 25).

Her general condition was that of sæpticæmia. Pulse quick and feeble, tongue of a dark color, abdomen tympanitic, a vague expression of countenance, with some stupor.

Jan. 8th.—Patient was much worse. Bowels enormously distended; hiccough; coma. The thorax had become purple from absorption of the poison.

Patient lingered until 8 o'clock, P.M., when she died.

II.—J. W., male, aged 68, of a nervous temperament, had always enjoyed excellent health, was vaccinated on the same day and with same virus as Case I. Although the patient was vaccinated late in the afternoon, he complained of considerable pain in the arm before retiring. I did not see him until the 7th, four days after the vaccination. The arm, at this time, was much swollen and inflamed, the inflammation presenting the same general characters as in preceding case. There was, however, less gangrene, with a greater discharge. Patient was very excitable. Pulse over 100, quick and feeble. Attendants stated that the preceding night was passed in an excited condition, the patient obtaining little or no sleep. Bowels loose; dejections black and fœtid.

Jan. 8th.—Had passed a restless night until 3 o'clock, A.M., when he obtained some rest. Tongue dark. Discharges dark, fœtid.

On the morning of the 9th the patient was quite stupid, the stupor passing into a state of coma, which terminated in death on the morning of the 10th.

The treatment in both cases was supporting. Tincture of iron and quinia were freely administered, as well as beef-tea and nourishing broths. Local applications of solution of carbolic acid were made, and nitrate of silver was drawn above and below inflamed parts. In Case II., bromide of potassium as well as chloral hydrat and morphia, was administered to control the great excitability.

La Cocotte.—According to M. Bonley, the eminent veterinary surgeon, at the Academy of Medicine *(Journal de Pratiques,* Nov., 1872), an aphthous fever, vulgarly called the *cocotte,* has been very fatal to calves in central France, causing the death of more than seven hundred in Nevers in June last. These calves often died suddenly *(comme foudroyés)* and fearfully distressed. Though known for a long time, the disease has been exceptionally severe in all European countries during the past year. It may affect all kinds of animals, and man himself does not always escape. The disease is characterized by eruption of vesicles in the mouth, on the feet, and sometimes on the teats and genitals. It is essentially contagious, the saliva and exudation of the feet being the usual vehicles of contagion; but it can be communicated also through the milk of diseased animals. Similar observations have been made at Berlin and in Holland.

Progress in Medicine.

REPORT ON PHYSIOLOGY.

By H. P. Bowditch, M.D. Harv.

[Concluded from p. 66.]

Glycogenic Function of the Liver.

Flint.—New York Medical Journal, January, 1869. Physiology of Man, vol. iii. p. 315.

Dalton.—Memoirs of N. Y. Academy of Medicine, June 15, 1871. Treatise on Human Physiology, 5th edition, p. 156.

Lusk.—On the Origin of Diabetes. N. Y. Medical Journal, July, 1870.

Bruecke.—Ueber eine neue Methode Dextrin und Glycogen aus thierischen Flüssigkeiten und Geweben abzuscheiden. Wiener Sitzungsberichte, Bd. 63, Abth. ii.

Dock.—Ueber die Glycogenbildung in der Leber und ihre Beziehungen zum Diabetes. Pflüger's Archiv, v. 571.

Weiss.—Zur Statik der Glycogens im Thierkörper. Wiener Sitzungsberichte, July, 1871, Abth. i.

Bock and Hoffmann.—Ueber eine neue Enstehungsweise von Melliturie. Reichert and DuBois Reymond's Archiv, 1871, p. 550.

Tiegel.—Ueber eine Fermentwirkung des Blutes. Pflüger's Archiv, vi. 249.

Bernard.—La Glycogenese chez les invertébrés. Revue Scientifique, ii. 401.

Ever since the discovery by Bernard in 1848 that the liver of recently killed animals contains a considerable quantity of sugar, the question of the origin and destiny of this sugar has been a most interesting one for physiologists of all nations. It soon became evident that the formation of sugar in the liver goes on very rapidly after the separation of the organ from the body, and some observers, with Pavy at their head, have gone so far as to declare the formation of sugar to be in all cases a *post-mortem* phenomenon. This view of the case is hardly consistent with the often-repeated observation on living animals that the blood of the hepatic vein contains sugar, while that of the portal vein is nearly or quite destitute of it. The question has of late years been investigated quite extensively in this country.

Flint confirms the observation of Pavy that the fresh liver contains no sugar, but in view of the presence of sugar in the hepatic and its absence in the portal vein, he concludes that sugar is formed in the liver and continually washed out of it by the circulating blood.

Lusk, also, finding in the blood of the right heart from two to four times as much sugar as in that of the jugular vein, concludes that sugar is normally formed in the liver, though its presence cannot be demonstrated in the tissues of the organ itself.

Dalton, on the other hand, analyzing large amounts of fresh hepatic tissue, finds that the liver contains, at least, 0.25 per cent of sugar.

Assuming the theory of Flint to be correct, viz., that the sugar is washed out of the liver as fast as it is formed, it is difficult to conceive how sugar can fail to be found when any considerable portion of fresh liver is subjected to analysis, for the small branches of the hepatic vein must always be filled with blood containing sugar. The failure to find sugar in the fresh liver is probably to be accounted for by a want of delicacy in the reagents or by the use of too small a portion of liver for analysis.

It is acknowledged by all observers that the liver contains, as one of its normal constituents, an anhydrous substance known as glycogen, from which the sugar of the liver is formed. The experiments of Dock, under the direction of Hermann, of Zurich, had for their object to settle the much-disputed question of the origin of glycogen. The animals used were rabbits, and the glycogen determinations were made by means of the method proposed by Brücke. The results showed that starvation for several days causes a disappearance of glycogen from the liver. It can, however, be restored by an injection of sugar into the stomach, but not by the injection of water or albumen. Experiments with fats were not made, as all observers are agreed that the ingestion of these substances does not affect the amount of glycogen contained in the liver. It would seem, then, that the glycogen of the liver is derived exclusively from the carbo-hydrates of the food, a result in accordance with the views of Pavy, but in opposition to those of Bernard, who has recently shown that in the larvæ of certain insects a formation of glycogen takes place when the food consists entirely of meat.

In considering the pathology of diabetes from this point of view, two hypotheses may be made. Either there is an increased metamorphosis of glycogen into sugar, or the sugar of the food passes directly into the urine, without going to form glycogen. To decide which, if either, of these two hypotheses is the correct one, observations were made on the influence of artificially produced diabetes on the formation of glycogen in the liver. In one series of experiments, two rabbits were starved several days to free the liver from glycogen. On one of them, the floor of the fourth ventricle was punctured, to produce diabetes, and both received an injection of sugar into the stomach. The livers of the two animals were then examined for glycogen. In the liver of the one which had received the "sugar puncture," glycogen was in most cases absent, though present in large amount in that of the one which had not been so treated. It was also found that, after starvation of several days, the sugar puncture produces little or no diabetes, and the question then arises: what becomes of the sugar injected into the stomach, since it appears neither in the urine nor the liver?

In another series of experiments, rabbits were starved for several days as before, then poisoned with curare and kept alive by artificial respiration, while the necessary injections of sugar were made into the stomach. The results showed that poisoning by curare prevents the appearance of glycogen in the liver after the injection of sugar into the stomach, and, moreover, causes the appearance of sugar in the urine, even when no sugar has been injected into the stomach. We find, then, in one series of experiments sugar absorbed from the stomach, appearing neither in the liver nor the urine, and in the other series sugar appearing in the urine, though present neither in the stomach nor the liver. These results plainly indicate that there must be some other organ or tissue of the body besides the liver where the carbo-hydrates of the food can be stored up and from which they may again appear as sugar in the urine. Whether this process goes on in the muscles, as made probable by the experiments of Weiss, or in any other organ, it is evident that the whole question is much more complicated than it appears either from Pavy's or from Bernard's point of view.

To explain the change of glycogen into sugar, the presence of a ferment in the liver or the blood has been assumed. Tiegel (in a series of experiments made under Kühne's direction) established the fact that starch and glycogen are more or less completely changed into sugar whenever, at a temperature between 30° and 40° C., red blood globules, suspended in a solution of these substances, are destroyed. The result is the same by whatever process the globules are destroyed. Whether the hæmoglobine or the stroma of the globules is the active agent in producing this change is an open question. The theory that a process of this sort goes on normally in the liver derives support from the known solvent action of the biliary salts on the red blood globules, and also from the fact demonstrated by Tiegel that the *post-mortem* change of glycogen into sugar does not take place when the liver has been entirely deprived of blood.

Bock and Hoffmann found that diabetes could be produced by the injection of a one per cent. solution of common salt into the blood of animals. The experiments lasted from five to ten hours, and the injections were made at the rate of about 30 cubic centimetres every five minutes. The first effect was to increase the amount of urine, and not long afterwards sugar made its appearance. After several hours, the urine was again excreted free from sugar, and if the animal was killed at this period the liver was found to be destitute of glycogen and sugar. If, on the other hand, the animal died while excreting sugar in the urine the liver was found to contain always sugar and sometimes glycogen. A pretty direct connection between the sugar of the liver and that excreted in the urine seems, therefore, to be evident. Unfortunately, these experiments throw very little light on the pathology of diabetes, for the dilution of the blood plasma, the increased blood tension and the irritation of nervous centres by the injected fluid are all possible causes of the passage of sugar into the urine, to decide between which further experiments are necessary.

LYMPH.

DYBKOWSKY.—Ueber Aufsaugung und Absonderung der Pleura-wand. Arbeiten aus der physiologischen Anstalt zu Leipzig, 1 Jahrgang, p. 40.

LUDWIG and SCHWEIGGER SEIDEL.—Ueber das Centrum tendineum des Zwerchfelles; do. do. 1 Jahrgang, p. 174.

GENERSICH.—Die Aufnahme der Lymphe durch die Sehnen und Fascien der Skeletmuskeln; do. do. 5 Jahrgang, p. 53.

LESSER.—Eine Methode um grosse Lymphmengen vom lebenden Hunde zu gewinnen; do. do. 6 Jahrgang, p. 94.

HAMMARSTEN.—Ueber die Gase der Hundelymphe; do. do. 6 Jahrgang, p. 121.

HELLER.—Ueber selbständige rhythmische Contractionen der Lymphgefässe bei Saügetheiren. Centralblatt für Med. Wiss., July 31, 1869.

Vulpian.—Sur les contractions rhythmiques des vaisseaux lymphatiques. Archives de Physiologie, ii. 779.

Goltz.—Ueber den Enfluss der Nervencentren auf die Aufsaugung. Pflüger's Archiv, v. p. 53.

Nasse.—Untersuchungen über die Einflüsse, welche die Lymphbildung beherrschen. Marburg, 1871.

The lymph spaces which have been demonstrated in nearly all the organs and tissues of the body seem, in certain regions, to play an important part in the absorption and circulation of the lymph. Dybkowsky discovered lymph spaces between the costal pleura and the intercostal muscles, and proved their connection on the one side with the pleural cavity through openings between the epithelial cells, and on the other with the lymphatic vessels. He also showed that, owing to the anatomical disposition of the parts, contraction of the intercostal muscles must dilate the lymph spaces, while relaxation of the same muscles allows them to contract. In the movements of respiration, therefore, the fluids of the pleural cavity are sucked into these spaces and then passed on into the lymphatic vessels. The valves of the latter, of course, prevent a flow in the opposite direction.

A similar arrangement has been shown by Ludwig and Schweigger Seidel to exist in the tendinous centre of the diaphragm. Here the lymph spaces which lie between the tendinous fibres open on the one side into the abdominal cavity and on the other into the lymphatic vessels of the thorax. The rhythmical movements of the diaphragm in respiration, alternately contracting and dilating the lymph spaces, tend, therefore, to remove fluids from the abdominal cavity and to transfer them to the lymphatic system. This may be shown as follows: A rabbit is cut in halves just below the diaphragm, and the anterior half suspended head downwards. The abdominal cavity is then filled with a colored fluid, e. g. a solution of Prussian blue. The lungs are then rhythmically inflated as in artificial respiration. After a short time the colored fluid will be found to have filled the lymph spaces of the diaphragm and to have entered the lymph vessels beyond.

Genersich showed that the lymph spaces in the fasciæ of muscles may be easily injected from the side towards the muscle, while the lymph vessels arise on the opposite side. This suggested the probability that fasciæ might, when alternately stretched and relaxed, tend to remove fluids from the muscles in the same way that the tendinous centre of the diaphragm removes them from the abdomen. This was shown to be the case by experiments which consisted in conducting a stream of defibrinated blood through the hind-quarters of an animal, and collecting the lymph as it flowed from the thoracic duct. As long as the limbs remained in repose the lymph flowed very slowly from the thoracic duct, but when the muscles were caused to contract by electrical stimulation the flow of lymph was much increased. Passive movements of the limbs, i. e. alternate flexion and extension of the legs, caused a still more decided increase. The amounts of lymph flowing in a given time from the thoracic duct during repose, during electrical stimulation and during passive movement, were found to be related to each other on an average as the numbers 1, 10.6 and 28.9. This would seem to indicate that the active contraction of the muscles is less important for the flow of the lymph than the passive stretching and relaxation of the fasciæ and tendons. We may, perhaps, find in this function of the fasciæ the rationale of those methods of treatment which consist in passive movements, rubbing and kneading of the limbs, &c.

Lesser experimented on dogs curarized and kept alive by artificial respiration. He confirmed the observations af Genersich on the effect of passive movements in increasing the flow of lymph, and found that in general the lymph flowed most abundantly when the blood pressure was lowest. This would seem to indicate that a dilated condition of the bloodvessels favors the production of lymph. This is in accordance with the observations of Gianuzzi* on an increased secretion of saliva, accompanied by dilatation of the bloodvessels and greater flow of lymph as the result of irritation of the chorda tympani.

This view is also sustained by the experiments of Nasse, who found that lowered blood pressure, produced by bleeding, caused for a time an increased flow of lymph, while irritation of the sympathetic nerve diminished the flow. He found, however, that increased blood pressure caused by irritation of a sensitive nerve was accompanied by an increased secretion of lymph.

Hammarsten analyzed the gases of the lymph, finding mere traces of oxygen, but from 28 to 40 per cent. in volume of carbonic acid. In an animal killed by asphyxia the blood was found richer than the lymph in carbonic acid, but this does not prove, as it might seem to at first sight, that the greater part of the carbonic acid is not formed in the tissues, but in the blood, for the amount of carbonic acid contained in alkaline fluids depends on the amount of substances capable of combining with carbonic acid which are present in those fluids.

Heller observed in the mesentery of guinea pigs, made insensible with chloroform, a rhythmical contraction of the lymphatic vessels, occurring about ten times in a minute, and causing a rapid propulsion of the lymph contained in them. These observations were repeated and confirmed by Vulpian.

In the experiments of Goltz two frogs were curarized and hung up by the head. In one of them (A) the brain and spinal cord were destroyed, and in the other (B) they were uninjured. On cutting the aorta, no blood flowed from A, but about one or two c.c. from B. A measured quantity of a one per cent. solution of common salt was then placed in the dorsal lymph sac of each frog. In A the fluid remained unabsorbed in the lymph sac, while in B it was rapidly absorbed and flowed from the aorta. The rapidity of absorption was increased by electrical irritation of the legs and diminished by rapid blows upon the abdomen, which operations respectively excite and inhibit the vaso-motor centre. It is, however, not easy to explain the above phenomena on the supposition that the vaso-motor system alone is concerned, and Goltz is inclined to regard the whole body as a sort of gland whose secretion is the lymph, and whose functional activity is regulated by the nervous system, in the same way that the submaxillary gland secretes under the influence of the chorda tympani. In this connection are to be mentioned the experiments which show that after destruction of the spinal cord it is impossible to keep the bloodvessels sufficiently full to insure the regular action of the heart, for artificially injected blood diffuses very rapidly into the serous cavities and connective tissue. Is this transudation the result of the diminished thickness of the vascular walls caused by distention of the vessels deprived of their natural tonicity, or does it depend upon the absence of a direct nervous influence which regulates the exchange of fluids between the interior and exterior of the vessels?

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* Von den Folgen des beschlennigten Blatstoms für die Absonderun g es Speichels. Berichte der K. S. Gesell. der Wissenchaften, Nov. 27th, 1865.

CARBONIC OXIDE IN THE BLOOD.

DONDERS.—Der Chemismus der Athmung ein Dissociations process. Pflüger's Archiv, v. 20.

ZUNTZ.—Ist Kolenoxyd hæmoglobin eine feste Verbindung? Pflüger's Archiv, v. 584.

THE prevailing theory in regard to the toxic action of carbonic oxide is that this gas drives out the oxygen from the blood globules and enters into a firm combination with the hæmoglobine.

According to this view, blood once thoroughly saturated with carbonic oxide is thenceforth incapable of absorbing oxygen from the lungs and conveying it to the tissues. The transfusion of fresh blood is therefore the only means of saving life. If the blood, however, is not entirely saturated with the poisonous gas it is possible that the oxygen still present may suffice to convert the carbonic oxide into carbonic acid, in which form it may be eliminated. This theory rests upon the observations and experiments of Hoppe-Seyler, Bernard, Hermann and others.

Donders has shown that when a stream of oxygen, hydrogen or carbonic acid, is carried through blood saturated with carbonic oxide, the latter gas is gradually driven from its combination with the hæmoglobine. It passes out, moreover, without any previous change into carbonic acid.

Zuntz subjected blood saturated with carbonic oxide to the action of an air-pump and succeeded in extracting the gas entirely, as was shown by the blood giving the single absorption band of reduced hæmoglobine.

These experiments show that the combination of hæmoglobine and carbonic oxide is by no means so stable as was originally supposed, and make it extremely probable that the gas is eliminated as such by the lungs.

This is, of course, an argument for the energetic employment of artificial respiration in cases of poisoning by charcoal fumes.*

IN THE CASE of an Austrian physician prosecuted for not having performed Cæsarean section, post mortem, on a woman dead of cholera at full term, the College Faculty at Vienna declared that the fœtus could not in any case survive the mother more than five or six minutes, and that in cholera the death of the fœtus always preceded that of the mother. The practitioner not having arrived till half an hour after the death of the woman, he was discharged.

IN 1870 there were eighteen hundred and seventy-one insane patients in all the public institutions of Massachusetts.

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* Writers of papers on Physiology will contribute much assistance in the preparation of these Reports if they will forward copies of their articles addressed to this JOURNAL.—EDS.

The Hospitals.

OPERATIONS AT THE BOSTON CITY HOSPITAL.

Plastic Operation for Loss of Lip. [Service of Dr. Cheever.]

The patient was a healthy young girl, who six years previously was wounded by a shot-gun causing conspicuous deformity of the face, and partial loss of the lower lip, whose remnant was so bound down to the jaw by the resulting cicatrix as to be practically useless, allowing a constant dribbling of saliva from the mouth, which could not be wholly closed. A plastic operation was proposed to remedy the defect, and to improve her general appearance.

Accordingly, after etherization, a vertical median incision was made from the mouth to the apex of the chin, and from the right of this line a portion of hard, cicatricial and therefore useless tissue was cut away. A second incision from the mouth was made at an acute angle with the first, and the intervening pyramidal-shaped piece of skin dissected away and slid over to join the median line. Beyond this line was a second portion of cicatricial tissue, which had to be sacrificed, and then a third incision was made extending from near the angle of the mouth about two inches toward the left ear, and then turning at an acute angle towards the left angle of the jaw. The large piece of healthy skin included between the incisions had a root or base about an inch broad, and was dissected away and slid over to form a part of the new mouth. After the flaps were sewed in position, there resulted a tolerably good though puckered mouth, while on the left cheek was a triangular space, bare of skin, which it was proposed to allow to heal by granulation.

One week later.—The patient now looks very promising. The entire flaps that were slid over are adherent near the mouth, and there is only a slight failure below, near the apex of the chin, which serves as a natural drain for the exudations. It is rare for a plastic operation to look as well at the end of a week as when it leaves the operating room. The treatment is a cooling lotion, while the only food is liquid, which is fed through a straw to avoid using the mouth.

Second week.—Union now perfect save a small hole midway between the mouth and chin. The triangular denuded space on the left cheek can now either be grafted, or a second plastic operation be attempted, and a piece of skin moved forward from the neck.

Third week.—The triangular raw surface was grafted with six morsels of cuticle from the arm; and they all appear to be taking well.

Congenital Cataract. [Service of Dr. H. W. Williams.]

A young girl, of about 10 years, had had one eye operated upon several years ago for cataract, probably congenital, by dividing the capsule. As she now sees tolerably well with that eye she is unwilling to have anything further attempted, and it remained only to perform the same operation upon the left eye, incising the anterior capsule of the lens, and allowing the aqueous humor to dissolve the lens gradually. This is the safest of all operations for cataract, but is applicable only to cases such as the present, where the cataract is soft. The puncturing of the eye with the needle occupied but a moment.

From Oct. 18th to Dec. 17th Dr. Williams has had a series of thirteen operations for cataract at the Hospital, by the new method, or "Median flap" extraction, of which the following is a summary:

Cases I. and II., Oct. 18.—Capt. ——, æt. 70. Median flap operation, with incision towards lower part of cornea, in both eyes. In right eye, immediate union of wound. In left eye, the exit of the lens was accompanied by a small amount of vitreous, which was exceedingly fluid, and the healing of the cornea was a little delayed by a small prolapse of the iris at one end of the wound, but this did not prevent a good recovery, and he left the hospital Nov. 13th, seeing distant objects with both eyes, with glasses of + 4½, and near objects with + 3½.

Cases III. and IV.—Mrs. ——, æt. 61. Her mother had cataract. She herself has been very myopic. Median flap in both eyes, Oct. 24th, with incision downwards. In right eye no accidents. In left eye, a thickened capsule caused irritation of the iris with some œdema of the eyelids, and this was therefore drawn out from the eye with small forceps three days after the operation, with relief of all the symptoms. Was discharged Dec. 15th, able to read with both eyes with + 3½, and seeing distant objects clearly with + 7, her previous shortsightedness enabling her to use glasses of less power than is usual after extraction.

Case V.—Mr. ——, æt. 62. Nov. 8. Median flap extraction in right eye, upward incision. No accidents followed the operation, and he was discharged in two weeks with good vision for distant objects with + 4½. Is to wait a little for his reading glasses.

Cases VI. and VII.—Mrs. ——, æt. 65. Her grandmother had cataract. Median flap extraction, upward section, in both eyes, Nov. 18. Was discharged Nov. 30th, twelve days after the operation, with an excellent vision at a distance with both eyes, with glasses of + 4½, and reading fine print with + 2½.

Case VIII.—Mr. ——, æt. 74. Right eye operated on, Nov. 28th, by median flap, upward section. Some adhesions existed between the capsule and pupillary margin, impeding the exit of lens; but the corneal wound healed promptly. When he was discharged, Dec. 13th, some fragments of capsule still interfered with the perfect clearness of the pupil, but he could already distinguish large objects well without any glasses, and the capsular remains were shrinking aside so that probably in a short time the pupil will be entirely clear.

Cases IX. and X.—Mr. ——, æt. 74. His mother is said to have had cataract. Median flap extraction in both eyes, with upward section, Dec. 13th. Two days after, the corneal wounds were healed and he could count fingers readily. Was discharged Dec. 30th, at which time he could readily tell time by the watch, with either eye, with + 4½. Glasses not tried for smaller objects, as he does not know how to read, and has little general intelligence.

Cases XI. and XII.—Mrs. ——, æt. 71. Median flap with downward section in both eyes, Dec. 13th. Was discharged two weeks after, with excellent vision in both eyes. Choice of glasses deferred for a short time.

Case XIII.—Mr. A. Median flap, downward section, Dec. 17th. A small hernia of the iris occurred on the third day at the inner extremity of the wound. This was excised and he recovered rapidly, being able to read ordinary print with + 2½ at the time of discharge, two weeks after the operation.

Bibliographical Notices.

Diseases of the Throat: a Guide to the Diagnosis and Treatment of Affections of the Pharynx, Œsophagus, Trachea, Larynx and Nares. By J. Solis Cohen, M.D., Lecturer on Laryngoscopy and Diseases of the Throat and Chest, in Jefferson Medical College, Philadelphia, &c. &c. With 133 illustrations on wood. 582 pp. octavo. New York: William Wood & Co. 1872.

The author of this work supplies a want long felt, of a text-book, somewhat comprehensive, on Diseases of the Throat and Nares. It is not so much a book for the specialist, as for the general practitioner who wishes to know, in as few words as possible, what aid modern science has given to the diagnosis and treatment of these affections. In a word, Dr. Cohen's book is a compend of existing knowledge in this department. Hence the subjects treated of are so numerous that it is impossible to discuss or even to mention many of them. The writer in a measure disarms criticism by saying in the preface that there is "an inequality of composition of which he is sensibly cognizant," which has arisen from the manner in which the book has been prepared. It is rather curious that what seems to us one of the greatest deficiencies of the book should occur in the chapter on "Aphonia," in which the physiology of the voice and the diagnosis and treatment of the various forms of paralysis are despatched in fourteen pages. The statements made in regard to the causes of different positions and tensions of the cords, seem to us much too positive in the present state of our knowledge, and at the same time meagre, no mention even being made of the sterno- and hyo-thyroid muscles.

Eighteen pages are well devoted to "glandular hypertrophy at the vault of the pharynx," since but little reference to this most important and not uncommon affection is found in any book. The writer says, "The glandular tissue at the vault of the pharynx is apt to take on simple hypertrophy or to become elongated into clusters of hypertrophied glands, which may be designated as follicular vegetations. The symptoms of this affection are similar, in the main, to those attending a protracted coryza or cold in the head, except that there is very little discharge of mucus from the nostrils; the mucus in these cases being expectorated through the mouth. There is more or less impediment to free nasal respiration, compelling the patient at times to keep the mouth open slightly so as to secure freedom of breathing. Occasionally there will be impossibility of sleeping on one side or the other, from stoppage of one of the posterior nasal openings by the dropping or falling over it of these pendant vegetations." . . . . . "In marked cases of the affection, there will be a deficiency in the enunciation of the nasal sounds of speech, the tones of m and n sounding like those of b and d." . . . . . "Sometimes there will be spitting of blood, inasmuch as the vegetations bleed very readily, and may be excited to hæmorrhage by the movements of hawking." As no accurate description of the anatomy of the nasal portion of the human pharynx is to be found in English, a translation of it from Luschka is given, which occupies eight pages. A translation of Meyer's description of the microscopic appearances of the hypertrophied glands is also given. As the author says, the importance of this tissue in a pathological point of view has been fully recognized since the introduction of the rhinoscope. With reference to its frequency, Meyer's experience is quoted, who met with one hundred and two cases in private practice within a period of eighteen months, and in two thousand children in the public schools for the poor, in Copenhagen, discovered twenty with the peculiar defect of enunciation, which he calls "*dead*" *pronunciation*, in all of whom he met with the existence of these adenoid vegetations. The treatment of these vegetations consists in destroying them by caustics, and in removing them by surgical operation.

A noticeable omission in the chapter on Affections of the Nasal Passages, is that of any allusion to the thickening and infiltration of the mucous membrane of the turbinated bones, especially the inferior, which is often productive of great discomfort, to say the least, and which often yields at once to local treatment. The sub-mucous infiltration of the nasal septum is, as far as we are aware, well described for the first time. The subject of chronic laryngitis is well considered, but the chapter could be much improved, and its contents made more easily available, by giving entirely distinct sections to the simple catarrhal, and each of the other forms of chronic laryngitis. We most heartily coincide with the author in his disagreement with Mackenzie, in regard to the occurrence of neoplasms in phthisis and syphilis.

"Mackenzie refers the formation of growths in the larynx to hyperæmia, and to catarrh as the most frequent cause of hyperæmia. He states 'that neither syphilis nor phthisis nor any other constitutional condition appears to favor the growth of these neoplasms. . . . . . Indeed, both the diathetic conditions referred to appear to exercise a decidedly antagonistic influence to the development of new formations.'" But what more frequent cause of hyperæmia and catarrh than phthisis and syphilis?

It is possible that phthisis and syphilis may exert an antagonistic influence to the development of cancer in the larynx, as they have been thought to do in other parts of the body. But, it certainly seems to us that the simpler forms of growths occur more frequently in patients afflicted with phthisis and syphilis than in those who are not. The illustrations of the interior of the larynx are not by any means beautiful, but are sufficient to elucidate the text. The illustration on page 29, of an examination by reflected light (from Bennet), is altogether too bad to have been copied. This drawing gives a thoroughly wrong impression of a proper laryngoscopic examination. It is of course evident, according to optical laws, that, where economy of light is desirable, the reflector, the laryngeal mirror and the eye of the observer should be as nearly as possible in the same plane, though in using sunlight this is not so important. An illustration of the method of examining, even by sunlight, should be made optically correct, far more if it is the only one showing the relative positions of physician and patient, to which the student would naturally refer also when about to use artificial light. In the present case, however, the eyes of the physician are represented so far above the mouth of the patient that it is doubtful if he could see the laryngeal mirror if he should look down, which he is not doing. The observer is represented as supporting the chin of the patient with one hand, and with the other holding the stalk of the mirror, not in the angle, but directly in the centre of the patient's mouth. The tongue does not appear to be held by anybody, or even to be protruded. All this is Dr. Bennet's fault, but certainly should not have been copied by Dr. Cohen. Throughout the book there is frequent credit to various authors on the subjects treated of, showing extensive reading on the part of the author. At the end of the book there is an index rerum of forty pages, which will be found serviceable to any one investigating the subjects treated of in the text. In conclusion, we commend the book most heartily to the English reading medical public, and congratulate them that the only book of the kind, as yet published in English, should be so good an one.

What Physiological Value has Phosphorus as an Organismal Element? An Essay to which was awarded the Prize of the American Medical Association for the year 1872. By Samuel R. Percy, M.D., Professor of Materia Medica in the New York Medical College, &c.

This is very much the kind of essay to which we should suppose the American Medical Association might cordially award a prize, an offspring after its own heart, full of magnificent promises and appearance of science, but wofully deficient in accurate observation or useful results. If all that the author states, with but little or no demonstration or detail except "I find," were to be depended upon, this little pamphlet would be a mine of wealth to physiologists, chemists and physicians, to which the labors of a whole laboratory full of German professors would be a trifle: provided always that they could understand it, a provision we insert with some diffidence, lest it should be shown that our own difficulty of comprehension is due to a defective knowledge of the new chemistry. We do not see, for instance, how "three units of blended glycerine and nitrogen with one unit of hypophosphorous acid" can be a "true alkaloid substance." This remarkable substance has been extracted by other chemists from the brain under the erroneous name of oleophosphoric acid, but it may be prepared by dissolving phosphorus in oil, adding a nitrogenous substance (extract of beef), and passing oxygen through the mixture, to convert the phosphorus into hypophosphorous acid, which combines with the oil, and the nitrogen which it extracts from the beef, to form a compound which would not be formed if hypophosphorous acid in a fluid form was mixed with the oleaginous compound. This alkaloid makes dogs frisky, cures boils, cough, pains, &c., incident to nursing (also the fretfulness of the baby), consequences of intermittent, anæmia, leucorrhœa, &c.

It will be interesting to those who wish to cure all their patients with this compound, to know that it is soluble in "chemogene and gasoline."

The author is also able to extract from wheat a soluble phosphate which has an equivalent of nitrogen in its composition, one corresponding with the "peculiar phosphate of the brain in man." Notwithstanding that this substance is a phosphate, and the other an alkaloid phosphate, we do not feel entirely confident whether two different substances are spoken of. He hopes to produce more.

We cannot help thinking that the habit of thought expressed in the following sentence, combined with a good deal of loose chemistry, is responsible for the peculiarities of this essay.

"There are thoughts that dwell within us until they seem to be realities, and although by strict inquiry we cannot in any way of positive reasoning prove them to be facts, we are not the less ready to accept them in our own minds as facts."

Vegetable Organisms as Causes of Disease. By Dr. F. STEUDENER. Translated from the German by Conrad Georg, M.D., Ann Arbor, Mich. J. R. Webster & Co. 1872. Pp. 41.

DURING the past two years a very valuable series of lectures has been appearing in Germany, edited by Prof. Volkmann, of Halle, under the title "Sammlung Klinischer Vorträge. Well-recognized authorities in the various branches of medicine have produced a summary of what is known with regard to subjects of daily occurrence, in what may be called a popular manner, that is subject and text are made so interesting that every reader receives pleasure and profit. Early this summer, Steudener's article on Vegetable Organisms appeared in the East, and now, at the beginning of winter, comes its duplicate from the West. In Dr. J. C. White's article on Vegetable Parasites, in the Massachusetts State Board of Health Report for 1872, one has, as it were, the complement to the paper now in question.

With regard to the vexed question of the identity of the parasites with other fungi, Steudener takes, somewhat summarily, the same ground as that maintained by White, laying great stress upon the fact that by inoculation with the spores of fungi the disease cannot be produced, the germinating cells of the parasites being necessary. It seems to us, however, that such reasoning is hardly valid, as one can readily conceive that the active principle may reside in or be produced by a fungus developed to a given degree only. The arguments with regard to this point are so well presented in Dr. White's article that nothing farther can be added.

With regard to the parasitic origin of infectious diseases Steudener shows very clearly the difficulties in the way of observation and judgment. At the same time he accepts the theory of Klebs that pyæmia and septicæmia are caused by a vegetable organism, the microsporon septicum.

Where malignant pustule is treated of, we miss a reference to the valuable work of Bollinger.

In conclusion, we are told that the investigations in general have produced very little positive evidence with regard to the causes of infectious disease, but that they have served to render probable the zymotic theory which was introduced in a very vague, indefinite manner.

Dr. Georg has made an excellent translation, and deserves credit for his forethought regarding the needs of the profession. The presence of several wood-cuts are of value as condensations of the text.

SINCE annexation to Prussia, Metz has lost 33,000 of its 49,000 inhabitants by emigration. Of its 36 practitioners of medicine, 4 died during the siege. At present, all others have left except a few detained by age and confirmed habits.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, JANUARY 23, 1873.

THE ANNUAL REPORT OF PRESIDENT ELIOT shows most clearly the success of the new system of instruction adopted by the medical department of Harvard College, and cannot but be a most interesting document to all well wishers of progress in medical education in this country. We quote from the financial part of the report such extracts as space permits :—

"The year 1871–72 was the first year of the new plan of instruction in the medical school, and of the new requisitions for the medical degree. It having been granted on all hands that these changes were excellent and desirable in themselves, the only ground on which they could be opposed was that they were not feasible in view of the fact that the entire endowment of the medical school is only $40,000 (forty thousand dollars). The comparison, therefore, of the current receipts and expenses of the year 1870–71 under the old system with those of the year 1871–72 under the new system is of particular interest. The number of students in 1870–71 was 301, while in 1871–72 it was only 203. Yet the receipts from students were only $3,600 less in 1871–72 than in 1870–71. Many of the students present in 1871–72 were under the old system, and a considerable portion of these were entitled to gratuitous instruction, under the former rule that students paid nothing for the third year of attendance. The fact is that 150 students present during the year under the new plan would give a considerably larger revenue to the school than 300 did under the old. Excluding all items from both sides of the account which were not items of current receipt or expenditure, the deficit for the year 1871–72 was $1,387.79. The corporation had expected a much larger diminution of receipts from students in the first year of the new system, and were more than satisfied with the actual money result."

In this connection we call attention to the advertisement on the first page of the JOURNAL of a new course of instruction for graduates, which it is proposed to notice more at length in another number.

WE congratulate Dr. Brown-Séquard upon the appearance of the first number of his *Archives of Scientific and Practical Medicine.* In our opinion, it is the model of a monthly medical journal, and decidedly superior to anything of the kind in this country. We hope the standard of the present number will continue to be maintained.

WE rejoice for the city of Boston in view of the really efficient and independent action of its new Board of Health. Such energy as the last week has witnessed in the sanitary affairs of this community must have gratified everybody who watched the "masterly inactivity" of the ponderous officials who preceded the present management.

But it is to be regretted that the Board did not confine its functions for the present to deeds, leaving the display of sophomoric rhetoric till a less critical season. The verboseness of their recent "appeal to the people" will not have the desired effect "to calm the public pulse," but will tend to compromise, in the public mind, the excellent impression which the work of the Board has justly developed. Let the authorities continue in the energetic stamping out of smallpox, and leave their pronunciamentos till later.

Retention of a Set of Teeth in the Throat for Fifteen Months.—J. H. Batchelder, of Salem (*The Dental Cosmos*, Sept., 1872), reports the case of a patient, a gentleman æt. 65, who had worn for several years a partial upper set of teeth on gold plate, which measured two and one-eighth inches in its widest part by one and three-eighths in its narrowest dimension. The teeth had never been secure in the mouth, and their owner frequently carried them about in his pocket, or left them in various places about the house.

While sitting in his chair, about two years ago, the patient was seized with a fit, upon recovering from which he experienced a sense of suffocation in the throat, accompanied by severe pain in swallowing. His family physician considered and treated the case as one of paralysis of the throat. No solid food could be taken, and there was constant uneasiness in the throat, attended with difficulty in swallowing.

Some five weeks after the attack, he asked for his teeth. His wife failed to find them, and then for the first time suspected that they might have been swallowed. On mentioning her suspicions to the physician, he considered the occurrence of such an accident impossible.

Fifteen months from the time he was taken with the convulsions—during all which time he had suffered from a painful cough—the patient awoke with an alarming sensation of suffocation. He soon recovered and went to sleep, but was again awakened, about two hours later, by a violent attack of coughing, during which the lost teeth were thrown into the mouth. His symptoms at once disappeared, and the next morning—the first time for fifteen months—the patient ate a substantial and solid breakfast.

In his recent new work, Prof. Gosselin mentions some of the unpleasant results of well-managed fractures. Slight atrophy of the muscles of the injured limb sometimes appears long after recovery, and continues without much hope from applications, electricity, exercise, &c. Occasionally, this atrophy appears only in a portion of the limb. In some cases, there is a veritable hypertrophy of the bone (not excess of callus) at the place of union—not always detrimental, but irremediable. There is, also, a neuralgic ostitis, from the time of the accident, continuing a long time, removable by time only. When near articulations, there may be long-continued, subsequent pains in the joint, due, probably, to a dry arthritis. In such cases, applications do but little good, except in temporary relief.

Unless great care is taken, considerable spontaneous displacement of the fragments may take place, just before consolidation, so gradually as to escape the observation of the patient and the attendant.

Correspondence.

VIVISECTION.

MESSRS. EDITORS,—Attention has recently been called in your pages to an article on the consciousness of animals, which appeared a short time since in the *British Quarterly Review*. In this article the writer, referring to vivisection, gravely expresses the fear that "science may be the Moloch of one age as superstition was of another, and that even the noble love of knowledge may prompt offences heinous and hateful as ever sprang from the lust of power or gold."

Without entering into a defence of scientific vivisections, which is fortunately quite unnecessary in this community, it may be well to suggest that even the noble desire to prevent cruelty to animals may possibly be pushed to a vicious extreme. If the head of our fire department had not a few weeks since, in obedience to an exaggerated public sentiment, refrained from risking the lives of a few sick horses, we should not now have to mourn the loss of millions of money and scores of human lives.

If those who join in an outcry against vivisections would avoid the charge of straining at a gnat and swallowing a camel, they should bestow a portion of their attention upon the much severer mutilations inflicted by sportsmen, without any pretence to a higher motive than their own inclinations. H. P. B.

"UNION OF SEPARATED PARTS."

To the Editors of the JOURNAL :—In the summer of 1858, I was called to see a boy whose left index finger was severed by a hay-cutter, at the base of the nail. As the fragment had not been found, I gave directions for suppressing the bleeding, and returned to the somewhat pressing case which I was attending previous to the accident. Ten minutes after, on coming back to the boy, I found that the hæmorrhage had subsided, and determined to try to restore the finger. The first step, obviously, being to find the missing part, I went out to the barn, and after groping for awhile among the hay-seed and "fine-cut," recovered it. After scraping the hay-seed and clot from the end, I secured it by three stitches and Emp. Adhes., *not less than fifteen minutes after the accident.* At the end of a week, appearances were so satisfactory that another week was allowed to pass without disturbing the first dressing. Then, upon removal, the nail and epidermis of the end came away with the straps, giving, at first, the impression that the whole fragment had separated. The nail was reproduced, but the joined end was never more than two-thirds the natural size, and so deficient in circulation and innervation that I should not repeat the operation under the same circumstances. S.

MESSRS. EDITORS,—In your last issue, "Hay Cutter" asks, "Can parts completely dissevered ever be united ?" I answer, yes. I have had two cases come under my care; in one three fingers were cut entirely off, in the other two fingers severed. In the first, two grew on nicely, the third refused to ; in the second case, one grew on, the other did not. I have seen one or two other instances where similar results followed, but these are the only ones in my own practice. In all these cases the fingers were cut off with hay-cutters while the victims were carelessly playing with them.

Very truly, C. K. KELLEY.

East Cambridge, Jan. 14, 1872.

Medical Miscellany.

U. S. MEDICAL REPORT FOR 1871.—The United States Army monthly reports of sick and wounded, received during the year, represent an annual average mean strength of 24,101 white, and 2,494 colored soldiers. Among the white troops the total number of cases of all kinds reported on the sick list was 47,575; the total number of deaths reported was 367. Among the colored troops the total number of cases reported was 3,514; the number of deaths from all causes reported was 54.—*Med. Record.*

A VALUABLE PRIZE.—The Riberi triennial prize of 20,000 *lire* (£800) has been awarded to Dr. Giuseppe Corradi, director of the surgical clinic at Florence, for four works on the Diseases of the Genito-Urinary Organs, three of which are as yet unpublished.

THE PUERPERAL TEMPERATURE COMMITTEE.—The Obstetrical Society of London have appointed a committee to collect evidence on the temperature of peurperal fever. The results of the work of the Committee are about to be arranged and a report drawn up on the subject.

AT a meeting of the Pathological Society of Dublin, in December, in a discussion on ether and chloroform we find the following remarks by Dr. Robert Macdonell, whose visit to Boston in September last many of the profession will recollect with pleasure: "Having recently returned from a visit to America he was able to speak from personal observatipn as to the use of ether in that country. The freedom, the confidence and the recklessness (as we would call it here), with which ether was there given, spoke volumes as to the reliance of the American surgeons on its safety. The anæsthesia produced was profound, and the confidence of the operator in its safety contrasted forcibly with the nervous anxiety of the surgeon when chloroform is used here."

THE *Nashville Medical and Surgical Journal* says, editorially:—

"No true physician fouls his mouth with such utterances as allopathy, homœopathy, negropathy, Indian-pathy, hobgoblin-pathy, globulistic-pathy, or spiritualistic-pathy, or any other pathy. A physician is a physician, and if he is anything more or less, he has no fellowship with those who cultivate medicine as a science, and practise it as a profession."

SMALLPOX is epidemic in Lisbon. The Society of Medical Sciences in that city has appointed a committee to consider what means should be adopted to arrest the spread of the disease; and specially, whether revaccination is expedient during its presence.

THE new Hospital for Women in Vienna was opened on December 15th, in the presence of the Statthalter of Lower Austria, the Burgomaster of Vienna, the Rector of the University, and other distinguished personages. Its medical officers are Dr. Beigel, who was, until lately, for some years resident in London, Dr. Schlesinger, and Dr. Lott.

MEDICAL FEES IN AUSTRIA.—At a meeting of the Medical Association in Vienna, on December 18, a report, from a committee appointed to inquire into the subject of medical fees, was presented. Reference was made to the insufficient payment which medical men received for the performance of medico-legal and sanitary duties; this, however, was a matter which would have to be dealt with by the legislature. With regard to fees from private patients, the following conclusion was arrived at after an animated debate. Considering the change of circumstances, and the remarkable increase of price of all necessaries of life, the society is of opinion that the fees at present paid to medical men are totally insufficient, and that they ought to be at least doubled.

NOTES AND QUERIES.

"Hay-Cutter" will please notice the following:—

A Tale of a Nose.—The readers of surgical works are doubtless familiar with those cases in which the nose is reported, after having been cut off, to have been successfully replaced —in one instance, after a dog had run away with it. An interesting example of the reparative power of nature in such an injury is recorded in last week's *Wiener Medizin. Wochenschr.* by Dr. Malfatti. On November 13th, 1871, Lieutenant Preiser, while in barracks, had his nose cut off by a sabre. The wound passed through the middle of the cartilaginous part of the bridge of the nose, dividing the left ala along its posterior third, the septum through its middle, and the left ala two lines behind the anterior angle of the nostril. The piece cut off was taken up from the ground where it lay, cleaned with cold water, and reäpplied, being secured in its place by means of sutures. A week after the injury, a dry scab began to form on the left ala, and extended in the course of three days over nearly the whole nose. Granulations gradually formed; healing went on steadily; and on February 1st, 1872, careful examination was required to detect any trace of the injury.

What becomes of all the animals inoculated with vaccine disease all over the country? They are said to be taken at once to slaughter-houses. Is such diseased meat fit to be eaten? Veal.

Important Admission.—"Readers of the Registrar-General's weekly reports must have noted with some surprise of late the prevalence of typhoid fever in London and its habitats. . . . . . We have heard that of the cases of typhoid fever in the West District not a few have occurred in the superb-looking new houses of the far West, where certainly one would not have expected to meet with that form of disease. . . . . . Sewers well and constantly flushed . . . . . hardly credible any overflow or leakage of sewers. . . . . But we have yet something to learn as to the causes and still more as to the modes of communication of typhoid fever; if not, its occurrence, in the homes of our wealthy and well-to-do countrymen at least, is a scandal and a disgrace."—*London Medical Times and Gazette*, Dec. 28th, 1872, Editorial.

"Some surprise," forsooth! Should we not study diseases to more purpose, if, without ignoring them, we ceased to lay greatest stress upon secondary and occasional adjuvants and took larger views of the subject? Maplewood.

Books Received.—Contributions to Mental Pathology. By I. Ray, M.D., author of Medical Juprisprudence of Insanity, and "Mental Hygiene." Boston: Little, Brown & Co. 1872. 12mo. Pp. 558. (From the Publishers.)

Married,—In Hamburg, Germany, at the Baptist Chapel, by Rev. J. G. Oncken, assisted by Rev. H. Liebig, Dr. Wallace H. Lovejoy, of Boston, to Sarah Agnes, daughter of first officiating clergyman.

Died,—In Andover, Mass., Jan. 13th, Stephen Tracy, M.D., aged 62 years.

Mortality in Massachusetts.—*Deaths in eleven Cities and Towns for the week ending January* 11, 1873.

☞Boston, 207—Charlestown, 20—Worcester, 12—Milford, 3—Salem, 5—Lawrence, 18—Springfield, 4—Lynn, 16—Gloucester, 1—Fitchburg, 5—Newburyport, 5. Total, 296.

Prevalent Diseases.—Smallpox, 64—consumption, 47—pneumonia, 18—scarlet fever, 10—croup and diphtheria, 8.

The deaths from smallpox were are thus reported: Boston fifty-six, Charlestown five, Springfield two and Lawrence one.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, January 18th, 178. Males, 96; females, 82. Accident, 4—apoplexy, 2—asphyxia, 1—asthma, 1—inflammation of the bowels, 2—bronchitis, 4—inflammation of the brain, 1—congestion of the brain, 2—disease of brain, 10—cerebro-spinal meningitis, 4—cancer, 3—consumption, 30—convulsions, 4—croup, 1—debility, 5—dropsy, 1—dyspepsia, 1—diphtheria, 1—scarlet fever, 10—typhoid fever, 1—gastritis, 1—disease of heart, 4—insanity, 1—jaundice, 1—disease of kidneys, 4—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 9—marasmus, 2—paralysis, 3—premature birth, 3—puerperal disease, 2—purpura hæmorrhagica, 1—scalded, 1—smallpox, 45—disease of spine, 1—teething, 1—ulcers of uterus, 1—scrofula, 1—unknown, 3.

Under 5 years of age, 53—between 5 and 20 years, 25—between 20 and 40 years, 61—between 40 and 60 years, 23—over 60 years, 16. Born in the United States, 116—Ireland, 38—other places, 24.

THE

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Original Communications.

TUMOR AFFECTING NERVES OF SEVENTH PAIR AND CEREBELLUM UPON LEFT SIDE.

[Read before the Boston Society for Medical Observation.]

By R. T. Edes, M.D. Harv.

Mr. W., æt. 45, and previously in good health, was in a railroad car which was capsized in September, 1864. He was somewhat bruised about his head and eyes. Soon after, was pretty hard worked in his business. In the autumn of 1865, he began to complain of pain in his eyes and to appear fatigued. In February, 1866, complained of dimness of sight, thought lights were poor, &c.

At this time he consulted Dr. H. Derby, who has kindly permitted me to make use of his notes:—

"Mr. W., æt. 45, came to see me March, 9th, 1866. He said nothing about any accident, but intimated that for six months or more he had experienced an occasional sharp pain, passing quickly from back of head into eyes. Of late, he thought he was growing a little deaf. Three or four weeks ago, began to notice that he needed more light to see a printed page, which at the best looked indistinct. This indistinctness gradually increased, and extended to all objects. For two weeks past much headache. General health good. Uses no tobacco and very little alcohol. Says his memory and reasoning powers seem as perfect as ever.

"Eyes externally normal. Vision of right, $\frac{20}{200}$; vision of left, $\frac{20}{100}$. Field of vision normal.

"I dilated the right pupil, and made a careful ophthalmoscopic examination. The optic nerve entrance was found swollen and bulging forwards, only to be recognized as the point of meeting of the vessels. These latter were enormously filled, broken, and in places obscured by the whity-gray cloudiness about site of papilla. Numerous retinal apoplexies in this region. Remainder of fundus normal.

"Diagnosis—cerebral disease, probably a tumor."

In the same month he was seen by Dr. Williams, who found an apoplectic retinitis, of the form indicating an interference with circulation in the retinal vessels, probably a tumor. An unfavorable prognosis was given to the family, which, as well as the diagnosis, was confirmed later in the summer, by Drs. Agnew and Noyes, of New York, who saw him with Dr. Williams.

First seen by me July 1st. He could then see somewhat with the left eye, and could distinguish the outline of a person's head against the light. The hearing was then a little dull.

An ophthalmoscopic examination showed the borders of the optic papilla in both eyes indistinct, and apparently covered with exudation, the vessels being partially covered by it in portions of their course. The retina showed various patches of hæmorrhage, mostly small; one large one was seen at a somewhat later period in the left eye (the best one).

In the latter part of July, he had, for several days, a pretty severe headache, which was relieved by purgation and hypodermic morphia. At this time it was mostly in the top of his head. Afterwards, he had similar attacks of greater or less severity, usually relieved by purgation, and also every day or two slight attacks of a few minutes' duration, referred more to the forehead and occiput. Appetite fair. Pulse, when examined by me, rather rapid, and at time of headaches intermitting. Friends who have examined at other times report about a normal frequency.

His sight almost completely disappeared during the autumn, though occasionally he seemed to see some dark object or a light. Has once or twice seen flashes of light.

He was seen by Dr. Brown-Séquard in the winter of 1866–67. He determined a slight degree of tactile anæsthesia as well as loss of motor power on left side, which led him to give a probable diagnosis of some affection, perhaps congestion with exudation, in the pons Varolii. I regret that I did not note his views in writing at the time. The family think that he located the lesion upon the left side. He advised iod. potass. grs. v. ter die, and tr. arnicæ gtt. v. ter die, also ice to the back of neck once a day. The patient not to be allowed to sleep more than eight hours out of twenty-four. The prognosis was unfavorable. This treatment seemed, so far as could be observed, without effect.

March 10, 1867.—Hearing has been gradually failing, and for the last month or two quite rapidly. At this date, distinct hearing is slight, though he hears noises and now and then makes out a few words. The family state that the left ear was entirely deaf in the spring of 1867. Tried double stethoscope and ear trumpets without avail. The sight is nil. Eyes rather prominent, pupils usually dilated, though sensitive to light. Appetite good; taste, as nearly as can be made out, not very acute. Mind apparently unaffected.

April 10.—Less headache lately, until within a day or two. Mind apparently normal. Takes an interest in all that is going on, so far as he can be informed about it by writing on his forehead.

May 9.—Hearing and sight none, though he thinks he hears his watch tick occasionally. He used to hear various noises which were probably entirely subjective, though there were at times some singular coincidences.

About this time he ceased to be regularly under my care, and tried various clairvoyants, &c. I continued, however, when attending other members of the family, to hear about him frequently, and to see him occasionally.

In September, he was said to have been having attacks of fainting or weakness, apparently unattended with loss of consciousness. Is said to be somewhat paralyzed on one side.

Sept. 3.—I saw him with Dr. Ezra Palmer. He had a well-marked left facial paralysis. His left hand and foot said to be much weaker than right. Lately less inclined to talk.

Nov. 2.—It is difficult to get him out of bed. Walks much bent over to left side. Often refuses to communicate. Makes remarks of such a character as to cause friends to suppose he is losing his mind. Has taken a dislike to some members of his family. Appetite very good. Uses aperient medicine constantly. Has lost flesh. Says that he does not smell much, but taste is apparently good, as he is rather particular about his food. Has had some attacks of a not very clearly-defined character, consisting, apparently, of sudden loss of strength, but not loss of consciousness.

Dec. 2.—Has not been up for four weeks. Can understand what is communicated to him by writing on his hand or forehead, or with his own forefinger on some hard substance, until he gets tired, when he does not try to understand.

This condition continued through the winter, headache being noted in February and April. From May to July, he seemed to improve.

Nov. 9, 1868.—Sits up, and takes more interest in what is going on. Paralysis remains, but is supposed better.

April 23, 1869.—Personal examination. Left facial paralysis complete, or nearly so. Left side of forehead smooth. Mouth drawn far to right. Moves left upper lid a little, and wife thinks he can shut his eye. During the visit, however, he did not wink, but the eye rolled up under the lid at short intervals. Left eye more prominent. Pupil considerably, but not extremely, dilated, examination being in a light room. Speech distinct. Has only partial control of left hand. If he loses hold, it goes flying about in uncertainty. Wife thinks the grasp with that hand is less strong. Relative strength of legs not inquired about. When conversed with by writing on forehead, often guesses a word or phrase before it is completely spelt out. Writing may be upon forehead, hands or knees. Has recovered his natural, amiable disposition. Intelligence and memory good. Has contents of the daily paper explained to him. Shows great interest in, and liking for, people he has never been acquainted with, but only heard of. Appetite good. No emaciation.

Aug. 27, 1870.—Paralysis about the same. No paralysis of sensation in face. Intelligence perfect, and memory really remarkable. Enjoys riding out. Has increased in weight.

1871.—No notes.

Dr. Spooner, of Hingham, who has kindly allowed me to make use of his notes, was called to see him on May 8th, 1872. His wife stated that he had not been so well as usual since the middle of winter. For past three or four months he has taken less interest in outside affairs, been disinclined to talk and somewhat irritable. For last few weeks, cough and dyspnœa. The physical signs showed some effusion into pericardium and right pleura, which improved under treatment. He became more cheerful and lively, and, on May 24th, rode out. Complains of weakness.

June 6th.—Patient has been to ride several times, sometimes several miles. Went to bed as well as usual last night. Soon after 12, P.M., his wife heard him speak, and then he sat up in bed and spoke again. There was a slight movement of the arms, but no convulsions. Did not speak again, and could not have breathed more than a minute.

Autopsy, 12, M., June 7th, thirty-six hours after death. Assisted by Drs. Webber, Nickerson and Spooner.

Rigor mortis moderate. Face drawn to right. Left eye prominent. Both eyes closed. Body well nourished, with large amount of fat. At the sagittal suture was a slight depression, which was perceptible both before and after removing scalp. The internal surface corresponded.

Arachnoid slightly opaque, chiefly in course of vessels. Consistency of cerebral substance normal. No appearance of congestion. Three-fourths of an ounce of serum in lateral ventricles; none over surface at vertex. The orbital plates arched up into cavity of cranium more than usual, thus leaving ethmoid plates at the bottom of a deep pit. The membranes, pia mater and arachnoid, with the brain substance, were adherent to ethmoid plates, so that cerebral substance could not be removed without some tearing. Olfactory roots translucent, without white color. Arteries at base generally very atheromatous.

Optic nerves very translucent (greyish), without the usual dead white color. This condition extended back to the corpora geniculata. A small part of the tracts was of a better color, but none healthy; and behind the corpora geniculata the translucent appearance was again marked.

Left side of cerebellum projected upward, and seemed larger than the right. A small tumor was seen behind the centre and apex of the petrous portion of temporal bone. This was about three-fourths of an inch in diameter. Behind it were several small cysts containing fluid, and the anterior part of left lobe of cerebellum was softened into a cavity, with no distinctly defined boundaries. The tumor had undergone fatty degeneration in the portions nearest the petrous. The inner surface of petrous was implicated in the tumor and eroded, the cavities of the bone in the neighborhood of the carotid and internal auditory foramina being filled with fatty masses. The facial nerve ran above the surface of the tumor, being partly lost in it, acquiring a translucent appearance. The auditory could not for some time be distinguished, but at last was thought to be represented by a very translucent band *below* the tumor, at least half an inch from the facial. The glosso-pharyngeal and part of pneumogastric were torn off during examination.

The facial and auditory of the right side seemed normal. Other cranial nerves not notably affected, judging by gross appearances.

One quart of serum in right pleural cavity; a little in left. Lungs healthy, except thickening and puckering at left apex. Heart very large; walls of ventricle thick and firm. Heart adherent in one place to pericardium. Abdominal organs healthy.

Microscopic Examination.—The tumor resting upon the temporal bone was in some places a spindle-celled sarcoma, passing in others nearly into the condition of fibroma. There was a considerable amount of fatty degeneration. Some portions of the tumor were seen, upon section, to be exceedingly vascular. The softened walls of the cavity in the cerebellum consisted of vessels and brain tissue in a state of fatty degeneration.

The apices of the frontal lobes, where adherent to the ethmoid plates, contained fatty vessels, and, I think, fatty cells.

The right auditory nerve was noted as normal. The right facial is noted as a little fatty within the auditory foramen, but I doubt the correctness of this observation, as it was normal outside of the mastoid foramen. The left auditory nerve was fatty.

Sections of the medulla oblongata were made, to learn the condition of the auditory nuclei on each side. No deviation from the normal condition was observed in the sections examined. The portion of the auditory nerve which sweeps round the medulla posteriorly contained cells not varying in size from the normal. This upon both sides. The auditory nucleus within the medulla was not observed to be changed, where examined. By some mistake, I did not carefully examine sections made at the point where the auditory nucleus reaches its greatest development, but at the lower part. It would seem, however, that had these nuclei been degenerated, the process would have been apparent here as well as higher.

Amaurosis is a symptom frequently observed in tumors of the cerebellum as well as elsewhere in the brain. Dr. Clifford Allbutt discusses the mechanism of its production, and concludes that, in the majority of cases, it is due to an interruption of the venous circulation, giving rise to pressure in the ventricles, and thus, either to pressure upon the optic tracts, or to the "choked disk." It seems certain from the early examinations that an interruption to the return of blood from the disk and retina was the cause of the gradual loss of sight. Whether the interruption took place indirectly by effusion into the ventricles, or more directly, is not so certain. The tumor might from its position have exercised pressure upon the left lateral sinus. There was no large amount of serum in the ventricles at the autopsy, although it is, of course, possible that it may once have been present and disappeared, leaving the retinæ and nerves irreparably injured.

Deafness, however, is far from a frequent symptom. Dr. Hughlings Jackson* quotes Vulpian as saying that nothing is rarer than trouble of hearing in alterations of the cerebellum. He himself has never seen a case of double deafness from tumor of the cerebellum. His impression is that "deafness does not result from intracranial tumor or other kind of adventitious product, unless the auditory nerve is actually involved, or directly pressed upon." He mentions, however, two cases (one his own), in the first of which there was a tumor at the junction of the pons and medulla oblongata on the left side, and complete deafness in both ears. In the other, the tumor grew from the sphenoidal fossa and extended as far backwards as the seventh pair. There was, however, no paralysis of the portio dura observed in this latter case. "In both the above mentioned cases the tumor could have affected (affected directly, that is) but one of the auditory nerves, and yet the deafness was double." He also records a case of a tumor the size of a walnut, which grew from the front part of the left lobe of the cerebellum, in which case there was deafness of that side only.

This present case does not contribute toward a solution of the problem. The deafness upon the left side is clearly accounted for by almost complete destruction of the nerve. A travelling across of a microscopic lesion from the auditory nucleus of the left side to that of the right might be thought of, but such a lesion was wanting, not only on the right side but on the left, where the nerve was destroyed. Any morbid process, beside extending across the medulla by continuity of tissue could hardly fail to involve the nuclei of the glosso-pharyngeal, pneumogastric and hypoglossal, which lie between those of the two auditories, and the functions of these nerves were slightly if at all affected. A transmitted pressure could hardly have been the cause, as it must have involved as well the rest of the medulla oblongata, and this we find transmitting nervous impressions from the brain to the cord perfectly upon the right side, and with only a very partial impairment, upon the left. The most promising alternative left is, it seems to me, a neuritis or degenerative lesion of the expansion of the auditory nerve in the labyrinth, analogous to the change observed in the retina. I regret exceedingly that the petrous portion on the right side, which I handed to Dr. Blake for examination, was too much decomposed to allow him to make any satisfactory observation on this point.

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* Medical Times and Gazette, July 13, 1872.

The motor paralysis is worthy of some remark, inasmuch as it was probably not so simple a phenomenon as in most cases of hemiplegia. Had the paresis of one side of the body and limbs been a mere consequence of pressure upon the medulla oblongata, it should have been upon the opposite side to that upon which it really existed, and upon which the tumor was situated, since the pressure must have been exerted at a point considerably above the decussation, and, moreover, would probably have involved the hypoglossal. It seems to have been rather that weakness and deficiency of motor power, which is not unfrequently observed in tumors of the cerebellum, than an interruption to the transmission of motor impulses to the muscles, and was, therefore, rather a consequence of the lesion (softening and cysts), secondary as I supposed it to be, of the cerebellum, than of the neoplasm itself. The paralysis of the face, much more marked, if not absolutely complete, was, of course, due to the destruction of the facial outside of the medulla.

Luys states, in regard to cerebellar hemiplegia (which is on the whole rare), that he has found it eight times direct and six times crossed. Cerebellar paralyses are characterized sometimes by a simple facial paralysis, sometimes an isolated paralysis of one member, and sometimes by a weakness more or less marked of all one side of the body.

According to Luys's theory of the connections of the cerebellum, when the paralysis assumes the form of a general weakness of one side, that is to say a failure on the part of the cerebellum to send its normal and usual reinforcements to the motor impulses passing from the brain to the cord, it should always be on the same side with the lesion, making two crossings, once to the opposite side through the middle and perhaps inferior crura, and back again through the decussation of the pyramids.

The posterior half of the left eye with about three-fourths of an inch of the optic nerve attached was handed, for examination, to Dr. O. F. Wadsworth, who reports as follows:—

The specimen was hardened in chromic acid and afterward in alcohol. The nerve was very evidently diminished in diameter, and the space between the sheaths was somewhat increased, but not more than the small size of the nerve would account for. There was no special expansion of the outer sheath near the globe. The retina, as was to be expected when only the posterior half of the globe is removed, was separated from the choroid and uneven, so that it was impossible to judge from its anterior aspect whether a projection at the outer side of the papilla was due to swelling or folding of the retina. A horizontal section through the nerve showed that the papilla as well as the retina on either side was very considerably thickened. Near the centre of the surface of the papilla was a shallow depression. On the inner side, the greatest thickness was nearly over the edge of the scleral opening, and then gradually diminished. On the outer side the swelling was much greater; here there was a marked rounded prominence. The greatest projection was a little to the outer side of the scleral edge, and from this point the anterior surface of the retina curved pretty sharply backward. Within little more than a line of the disk on either side, the retina became of nearly normal thickness. Behind the elevation, on the outer side of the disk, a greyish, semi-translucent, oval mass could be seen with the naked eye, apparently imbedded in the outer layers of the retina. For a short distance only, near the papilla, the retina was in contact with the choroid, elsewhere it was free and its posterior surface was covered by a thin, easily-detached, friable layer.

Microscopic examination of transverse and longitudinal sections of the nerve showed that it was in an advanced stage of atrophy. Nowhere could normal nerve fibres be seen. Fragments of longitudinal sections, teased out with the needle, brought to view fine fibres, the size of axis cylinders, but without their characteristic varicosities, which may perhaps have been altered nerves. The bands of connective tissue surrounding the nerve-bundles were wider and more irregular; the spaces between them smaller and more broken than normal. The fine fibres and small, round and stellate cells, which are found in the normal nerve around and between the fibres of the nerve-bundles, were decidedly increased in number. This was especially evident in their transverse sections. Here, in many places, nothing but a mesh-work of fine fibres, interspersed with small, rounded cells, could be seen in the spaces normally occupied by the nerve-bundles. The fibrous bands, passing across the entrance of the nerve from the sclera to form the lamina cribrosa, were much enlarged. The central vessels presented nothing special. The inner and outer sheaths were apparently normal; in the meshes of the space between the sheaths, however, there was an evident increase in the number of small cells.

The increased height of the papilla appeared due in part to proliferation of its connective tissue elements, but also in great degree to a peculiar thickening and change in the walls of the vessels. The calibre of the larger vessels was generally diminished, but with the exception of one or two of the larger arterial branches the walls of all the vessels were greatly thickened and presented a homogeneous, glistening appearance. Many vessels with the calibre only of capillaries, and which, from their position and course as well as their number, must apparently have been such, had glistening walls two or three times their calibre in thickness. The hypertrophy of the papilla was limited to increase in height; laterally it did not spread beyond the scleral border. Rather to the outer side of its centre were the traces of a physiological excavation, but this was nearly filled by a growth of connective tissue fibres, and from its borders a thin layer of connective tissue spread for a short distance on both sides, parallel with the anterior surface of the retina, but separated from it by a narrow interspace.

The retina showed everywhere atrophy of the nervous elements; the nerve fibre layer, even in the neighborhood of the papilla, was diminished in thickness, and contained an increased number of round and oval nuclei; no trace of ganglion cells were seen. Sclerosis of the walls of the vessels, so marked in the papilla, existed also, though to a much less degree, in the retina. In the portion of the retina near the papilla, the changes were much greater, especially of the outer layers, the alteration of which alone contributed to form the increased thickness. In the nerve fibre layer, the radial fibres were rather more distinct than normal, and the internal limitans was slightly thickened and thrown into minute folds, apparently from irregular lengthening of these fibres. Scarcely a trace of the normal structure of the outer layers could be made out. The tissues were converted into a meshwork of fibres, in the interstices of which small round and oval nuclei, and pale, granular, oval or stellate cells were situated. This meshwork was made up of the extremely elongated radial fibres, which interlaced in all directions, often formed large loops, or, near the surface of the choroid, curved round and ran almost horizontally for some distance. A little removed from the edge of the nerve was an exudation, somewhat oval in cross section, lying just in front of the choroid. It was strongly refracting, nearly homogeneous, and round and oval cells, part pale, part containing brown pigment, lay in crevices in its substance. In many places around its edges, and on its anterior surface, brown pigment was heaped up, mostly contained in cells. Comparison of numerous sections showed that the exudation extended nearly if not quite around the nerve, and was much thicker on the outer side, where it made up fully one half the height of the greatest prominence. In front and on the sides of the exudation, the fibres of the retina could often be traced a short distance into its substance, and here and there the fibres curved in a long sweep toward its posterior surface. Around the walls of one retinal vessel, a mass of brown pigment, contained in cells, was heaped up, and from this a band of connective tissue could be traced backward, along which cells containing pigment were scattered. Elsewhere, except in the outermost meshes, hardly a trace of pigment was found in the retina. There were no signs of hæmorrhage, and all the pigment seen resembled in color and appearance that of the retinal epithelium. The thin, friable layer, which has been mentioned as lying on the posterior surface of the retina, consisted of granular matter, small cells, pigment cells and free pigment. There was no trace of the rods and cones. The epithelial layer was generally in place, but greatly altered; the cells were much increased in number, their contour and arrangement irregular, and but few showed any appearance of a nucleus.

The choroid, aside from an apparent thickening of the connective tissue, was normal so far as examined.

Progress in Medicine.

REPORT ON DISEASES OF CHILDREN.

By D. H. Hayden, M.D.

Rhachitis.

The following extracts are taken from an article by Dr. John S. Parry, in the January number of the *American Journal of the Medical Sciences* for 1872, entitled "Remarks upon Rhachitis." In the commencement, the author gives a full and interesting historical account of the disease. There is a prevailing opinion in America that rhachitis is a much rarer disease in this country than in Europe. According to Parry's experience, based upon observations in a large hospital in Philadelphia, this is in no ways true. Of all the children between one month and five years of age, twenty-eight per cent. were rhachitic, whilst according to statistics of Rittershain, of Prague, taken from his clinique, thirty-one per cent. were affected with this disease; nor is the disease confined to hospital practice and to the poor, it being found also amongst the upper classes. It is, to be sure, extremely rare in new-born infants, but at the same time it is not correct to say that this is never the case. The writer himself has never seen it, although it was often sought for by him in the autopsies of a great number of new-borns and of infants who had died shortly after birth; but several such cases have been reported. Gee (*St. Bartholomew's Hosp. Rep.*, iv. p. 71) has observed it as early as the third or fourth month. After completion of the first dentition, children, who up to this time have been healthy, are never affected. The thickening of the ribs has generally been taken as the first unmistakable physical sign of the disease, but there are certain characteristic symptoms which make their appearance before these changes, and which, until recently, have received no attention; amongst these are to be classed the disturbances of digestion described by most authors. Amongst the symptoms almost always preceding the affection of the bones are to be mentioned: profuse perspiration and a general increase of the temperature of the body at night. The perspiration is a local one, being particularly limited to the head, neck and upper portion of the breast and back; these parts feel cold and moist. In the other parts of the body, the skin is red and hot. This local perspiration takes place principally during sleep; sometimes, however, when the child is awake, after any excitement or movement. The perspiration is often so profuse as to wet through the pillow. The high temperature at night, which the mother often speaks of without being questioned upon the subject, is so great that the child throws off the bed-clothes, even in the coldest season of the year. It is very rare for this symptom to be absent, though, according to Parry, the former is the most important, diagnostically; and from its existence, alone, the diagnosis of commencing rhachitis can be made.

Some authors speak of a universal tenderness of the body and pain on the slightest movement; this symptom Parry believes to be the sign of the commencing changes in the bones, and due to them, which opinion Vogel shares with him. The rolling of the head to and fro by the child upon the pillow, by which the back part becomes bald, is classed by Parry with the above; and these symptoms, together with those referable to disturbances of nutrition, constitute the prodromata of the completely developed disease, not confined, however, to the earliest stages alone, but often extending into the second period—that of disease of the bones.

The first appearance of disease of the bones is a thickening of the ribs at their juncture with the costal cartilages; this enlargement, however, is not always demonstrable, as Parry has, in some autopsies, found it situated upon the internal intra-thoracic side, there being no change upon the external surface, and consequently nothing perceptible to the touch. This fact has also been noticed by Vogel. To discover this change, we must examine carefully the lower left front of the chest at the articulations of the fourth, fifth and sixth ribs with the costal cartilages; these, over the region of the heart, being the earliest affected.

Simultaneously with these appearances on the ribs, in some cases preceding them, craniotabes shows itself. According to Elsässer and Vogel, this is the first symptom. Parry has seen thickening of the bones of the forehead when there was no craniotabes, but never without there being, at the same time, thickening of the ribs. The disease of the bones of the extremities is generally, not always, seen at the wrists first. Brayne relates a case where the elbow was first affected. As the disease advances, it invades quite generally the osseous system, and the bones become sometimes enlarged to twice or thrice their original size. As a rule, the lower extremity is less frequently affected than the upper extremity and ribs. Those bones are especially attacked which are but thinly covered with soft parts, though the femur and humerus do not always escape. At the same time that the epiphyses swell, according to accurate measurements by Alexander Shaw, the diaphyses become shortened and diminished in circumference. The diminished stature is not owing exclusively to the curvature of the extremities, but in part to an actual shortening. The standstill in growth is a greater one in the lower than in the upper extremities.

All the bones of the extremities are curved or contorted, the cause of this deformity being attributable to the action of the muscles or to that of the weight of the body—according to Parry's views, to the latter. The humerus can be bent in two directions, either outwards, because the child leans over and supports itself upon its wrists, or it is bent at the place of insertion of the deltoid, not from any action of the muscles, but from the weight of the arm, which bends the humerus while drawn up and supported by the deltoid. The forearm is bent outwards and forwards; in the femur, the natural curve is increased or it is bent either inwards or outwards; the bones of the leg either outwards or forwards. The bones of the cranium undergo changes, both in their thickness and size; to the changes in thickness belongs the craniotabes first described by Elsässer, which has a special importance from the nervous symptoms accompanying it. It is the posterior part of the head alone which is thus affected, and, as a rule, only the occiput, the protuberantia, however, always being free. In severe cases, the disease affects the posterior border of the parietal bones, and sometimes the squamous portion of the temporal; the parietal eminences remain invariably intact.

The number of perforations in cases of softened occiput varies; Parry observed one case with twenty-two, Elsässer describes one with thirty. Parry counsels great caution not to confound such with those dependent upon deficient ossification. These perforations, dependent upon a previous thickening and consequent softening of the bone, are brought about by the pressure of the brain from within and of the pillow from without; it is only thus that their occurrence upon the occiput can be explained, and when they take place elsewhere it must be due to the peculiar position in which the child lay. Parry coincides with the view of those who trace a connection between craniotabes and laryngismus stridulus, considering the latter as caused by the former, for the following reasons: the occurrence of both at the same period of life; the causes being similar (Clark, West, Lee); further, pressure is a powerful, exciting cause of laryngismus stridulus, the occurrence of the attacks at night being thus explained; both yield to the same remedies (Jacobi, Gee). Laryngismus is not the only nervous disease connected with rhachitis. According to Petit, Elsässer and Gee, convulsions are frequent in rhachitic children, and this disposition to convulsions is the great cause of the mortality amongst them.

The changes in thickness of the bones of the cranium are not easy to discover during life, but when the disease is strongly developed a thickening in the neighborhood of the sutures can be demonstrated. In many cases of rhachitis, the bones of the face seem very small in comparison with those of the cranium. The fontanelle and often, also, the coronal and sagittal sutures remain open until the third or fourth year, sometimes until the end of the sixth. An actual increase in size of the bones of the cranium does not take place according to the measurements of Rufz, the chief change being in the bones of the face, which, in rhachitic children, are smaller. With regard to the changes in shape, two general types are to be remarked: (1) the antero-posterior diameter can be diminished; (2) the head loses its normal round form and assumes a rectangular one, this last change being by far the most frequent; the forehead is very prominent, the prominences of the os frontis and of the parietal bones being strongly developed, and the cranium above and posteriorly, also the frontal suture being depressed. The rhachitic skeleton in addition to its deformity is characterized by a stand-still in its growth. Dentition is, as a rule, delayed, and the fact that a child has reached its ninth month without dentition having commenced suffices to awaken a suspicion of beginning rhachitis. The teeth come with difficulty, and their shape and arrangement are often abnormal. It is not uncommon for rhachitic children to be one year or eighteen months old without dentition having begun. The clavicle is often very deformed, but Parry has never seen this without the thorax being simultaneously seriously affected.

The walls of the chest are laterally compressed and flattened, the sternum pushed forwards. By enlargement of the liver, the border of the ribs of the right side is pushed upwards. Much stress is laid by Merée and Dupuytren upon the existence of enlarged tonsils in cases of rhachitic thorax. The effect upon the heart and lungs of such a thorax is an important one. Parry agrees with John Shaw, in opposition to the views of Eulenburg, that lateral curvatures of the spine are rarely the result of rhachitis. The diminished size of the pelvis

Parry considers often caused by it. The abdomen we find enlarged and prominent, the causes of this being numerous; in the first place, the diminished thoracic cavity: then, tympanites, which is nearly always present. Enlargement of the liver and spleen are sometimes found. Parry calls particular attention to a false paraplegia sometimes met with in rhachitis which could be easily confounded with a true paraplegia. Children attacked with this are small, have a large head, weak intelligence, a peculiar aged look, and but little deformity of the bones; the lower extremities are powerless, the muscles atrophied, the child cannot stand, but has strength enough to move the limbs when sitting or lying; the muscles react with electricity. That this disease has a connection with rhachitis is more than probable from the fact that we find coëxisting the other symptoms peculiar to the disease. After rhachitis, perfect health and long life can follow, and the bones can become strong and firm.

IRREGULARITY OF TEETHING, A MEANS OF DIAGNOSIS OF BEGINNING RHACHITIS.

L. FLEISCHMANN.—[*Wiener Med. Wochenschrift*, No. 50, 1871. *Allg. Med. Cent. Zeitung*, 1872, Nos. 1 and 2.] This subject is generally very briefly alluded to in text-books of diseases of children, and generally with the remark that rhachitis is the cause of a delay in the appearance of the teeth. Rhachitis can be hereditary or acquired. It is with the latter class that the author has to do, and is the most frequent form, affecting nearly one-third of all children. Rhachitis is due to a peculiar disturbance of nutrition in a growing body, a "dystrophy," amenable with more or less success to treatment at the beginning. Children nourished artificially are, for obvious reasons, more liable to it than those brought up at the breast, and the latter, when affected, are generally so after weaning, that is after the tenth or twelfth month. The disease manifests itself most strikingly in different parts of the bony skeleton, although other parts of the body show traces of insufficient development. For the increase of secretion of the phosphates in the urine in many cases of rhachitis, we have at the present day no sufficient explanation, yet we know that the treatment, based upon this symptom, of administering these salts has not proved effectual. The phosphates not only serve for formation of bone, but are also contained in the plastic juices as albumen, fibrin, casein, and, according to Liebig, the insolubility of the form-elements is due to the combination of these matters with phosphate of lime. This explains the richness in phosphates of these plastic exudations, whilst in non-organized exudations they are absent.

More sensitive than the other bones to an insufficient supply of the phosphates are the teeth, analysis showing them to contain 98 per cent. of inorganic matter, of which 88.5 per cent. is phosphate of lime and fluoride of calcium, and 8 per cent. carbonate of lime. The teeth come first in the order of bones affected, and the disturbances, therefore, in the ossification of the teeth can serve as a valuable sign of a very important disease. The formation of the embryo of a tooth commences in the second month of fœtal life, and in the middle of the third month is completed for all the teeth. The milk-teeth are formed in the fifth month, and are so far advanced at birth that the crowns of the incisors and first molars are completely developed, those of the canine and posterior molars one-third formed. As the acquired rhachitis, according to experience, rarely comes on before the end of the sixth month, and most frequently in the latter part of the first year, reaching its highest point between the second and third year, it follows that, if we place the appearance of the first teeth at the seventh month, the rhachitic process will not have had any influence upon these. The only exceptions to this are when a hereditary rhachitis makes rapid progress immediately after birth, or when the infant is weaned very early and is brought up with improper food; in such cases, it happens sometimes that one waits in vain for the appearance of the first teeth and sees a year or more elapse. In the majority of cases, rhachitis shows itself first after the breaking through of the first molars. We should be very watchful for the appearance of these latter, and of the following groups. There is a great difference within the limits of health as to the time of their appearance; according to Bednar, it is between the eleventh and seventeenth month, Barthez and Rilliet placing it still later. A child that gets its first teeth at four months will finish teething earlier than one that gets them first at eight months. The early or late appearance of the first incisors often depends upon hereditary peculiarities, and has no signification. The important point is how great is the interval of time between the appearance of the different groups, for when a child has once begun to teeth it generally preserves a certain regularity.

Accepting rhachitis as a disturbance of nutrition, great attention must be paid the diet. When practicable, a suitable nurse should be obtained, even when the mother can nurse, if her previous offspring be rhachitic. For children who must be brought up without the breast, the relationship of the nourishing matter to the salt in the mother's milk is the best guide in the construction of the food. Liebig's composition is the most useful to be added to the milk, especially when there is disposition to the formation of acids; when this cannot be obtained, care must be taken to neutralize the cow's milk, which is generally acid. The children should be in the open air daily one to two hours, and in the meanwhile the room should be well aired. Children who have, at least, ten teeth can have a mixed diet, but should not be allowed all food upon the table, especially when it is highly seasoned. The abundant use of specific remedies, as phosphates, is based upon the attachment of too much importance to single symptoms and upon a want of appreciation of the whole process. When digestion is once impaired, the phosphates are not able to effect a restoration of the body poor in plastic juices.

Of first importance in connection with careful diet is the employment of tonics, either alone or with bitter medicines and iron. If the strength become somewhat increased, an attempt may be made with cod-liver oil, but not to be forced if there is great aversion to it. The character of the dwelling demands great attention. Baths several times a week containing salt, aromatic herbs, iron, malt or bran, also help. Against the laryngo-spasmus, in addition to general treatment, electricity and washing the head and back with cold water are recommended. Deformity of the bones requires proper orthopædic measures, and with a disposition to such, the little children should not be carried in a sitting position, but should be made to lie on hard bedding. If neglected at the earliest period, the later condition of the bones renders the treatment of changes in their shape, after recovery from rhachitis, fruitless. Cod-liver oil, when well tolerated, is to be employed, not as a specific, but as food, allowing the formation of plastic material to go on better, by reducing, like other fats, the consumption of the nitrogenous matter. If, under its use, indigestion or diarrhœa comes on, its continuation does harm, aggravating the disease. It should be given in teaspoonful doses daily, increasing to a dessertspoonful, the latter quantity in divided doses. Diminished appetite is improved by the amaro-adstringentia, and in this respect iron is the best remedy, having, in addition, a good effect upon the formation of the blood. ℞. Tinct. ferri malat., ʒij., tinct. malat. amar., ʒi.; M. S. three times a day, three to five drops. Wine, water, milk, soup, &c., can be used as a vehicle. If there is diarrhœa, the tinct. ferri malat. is contraindicated, and we can try ℞. Tinct. ferri muriatis, aquæ cinnamom., āā ʒiij.; S. as above; or ℞. Ferri carb. sacch., ext. ligni campech., āā gr. vi., elæosacch. vanillæ, ʒss.; div. in dos. sex. S. Morning and night, one powder. The following is also good: ℞. Ferri lactatis, gr. vi., sacch. alb., ʒss.; div. in dosis sex. S. Morning and night, one powder. Larger doses of iron than the above are superfluous, as it passes away with the stools. Fleischmann prefers the medicine in the liquid form for infants. Where there is acidity of the stomach he prescribes: ℞. Ferri carb. sacch. gr. x., sodæ bicarb., sacch. albi, āā ℈i.; div. in dosis x. S. Morning and night, one powder. When there is habitual constipation: ℞. Ferri carb. sacch., pulv. rhei or ext. aloes āā gr. vi., elæosacch. cort. aurant. ʒss.; div. in dos. sex. S. as above. The affections of the bronchi and lungs, which make their appearance frequently in the spring and autumn, require great care. In the lighter cases, a mixture containing ipecac. (gr. i. ad ℥i.) suffices. In inflammation of the bronchi, and in broncho-pneumonia with a weakened action of the heart, Fleischmann has seen good results from the use of carbonate of ammonia, which remedy he urgently recommends in such cases. ℞. Mist. gummosæ ℥ij., liquor. ammon. carbonat. gtt. x.–xx. S. One teaspoonful every two hours. When there is fever, the child should be confined to the room, and, in infants, the bath should be omitted. Rhachitic children, more than any others, are very sensitive to changes of temperature, and it is a good plan for them to wear flannel next to the skin.

The Use of Chloral Hydrate in Children's Diseases.

Alois Monti.—[*Jarhb. f. Kinderheilk.*, N. F., v. 1, Dec. 1871.]—Chloral hydrate has the same effect upon children as upon grown people. As first effect, is seen a slight reddening of the face; from within half an hour to an hour after a dose, a condition similar to drunkenness sets in, followed by deep sleep. At first, the pulse is somewhat accelerated, but later it becomes slower than normal. Respiration remains unchanged, the temperature sinks one tenth. The sleep is a perfectly natural one, and there is more or less anæsthesia. After very large doses, the hypnotic effect is preceded by considerable excitation, with contracted pupil, followed by deep anæsthesia and stupefaction. After waking, no disturbance of the general health is left behind, no sleepiness, no cerebral congestion. In a few exceptional cases it causes vomiting, never diarrhœa; on the day following its administration, the urine reduces Fehling's solution. As an anæsthetic its value is very slight, and it is not recommended for such purpose; but, as a hypnotic, it has proved itself a most excellent remedy. For new-borns, the dose is one grain, for sucklings two to three grains, for children under five years five grains, and for children between five and twelve years eight to twelve grains. In cases of new-borns, Monti prescribes it generally in powder form, as follows: ℞. Chloral hydrate gr. vi., pulv. gummosi ℈i. Div. in dos. sex. To be given dissolved in a small quantity of the mother's milk. When the children are older, the author prescribes the same in an aqueous solution. The prescribed dose is generally ordered every ten or fifteen minutes, until the effect is produced. When frequently repeated during the twenty-four hours, a certain precaution is necessary, as, according to Richardson, it has sometimes a cumulative action. Beyond a certain amount, it should not be given within twenty-four hours, even should the symptoms continue. In infants six to ten grains, in children under five years ten to twenty grains, and in larger children twenty to forty grains should not be exceeded *pro die.*

The application of chloral hydrate as enemata is only allowable when it cannot be given by the mouth, and, in such case, double the dose is commonly used, dissolved in a small cup of barley-water. The effect is produced more slowly and after a longer period. Verga and Valsnani have used chloral hydrate in the form of suppositories, and in children's practice this method would be preferable to enemata.

Various observers have, in the course of the last year, experimented with chloral hydrate in cases of trismus and tetanus. Results varied. Most cures reported by other authors were of cases where there was a protracted course and the temperature low; in such cases, according to Monti's experience, the prognosis is most favorable, and the curative power of chloral hydrate in tetanus should not be considered as demonstrated until cases are published where recovery takes place in spite of a rapid course and high temperature.

The action of chloral hydrate in the convulsions of children is favorable, according to Monti being indicated in all cases of convulsions, whether idiopathic or symptomatic, except when there are complications of bronchial, lung or heart troubles. The medicine not only puts a stop to violent convulsive movements, and shortens the paroxysms, but prevents also their return. In cases of anæmic and atrophied children, or where there is collapse, great caution is necessary. The remedy is particularly effective in idiopathic convulsions of new-borns and sucklings four to eight weeks old, and in the uræmic convulsions in Bright's disease after scarlet fever; also in convulsions, the result of meningitis or tubercular disease of the brain, it is recommended, and has the advantage of opium that no bad effects are left behind. In those cases only of laryngo-spasmus which are not connected with rhachitis, chloral hydrate is indicated; with the latter, the anti-rhachitic treatment being more effective. In chorea major as well as minor, chloral hydrate has been extensively recommended. According to Monti, as a symptomatic remedy, it is worthy of consideration; at first, the doses should be small, and later gradually increased. As a hypnotic, the author has frequently used chloral hydrate in delirium, whether following meningeal or cerebral disease, or the result of high fever, as in the exanthemata, typhoid fever, &c., and always without any bad after-effect.

In pertussis, according to the observations of Ferrand and Walter Ridgen, as well as from the author's own experience, chloral hydrate seems to act only as a palliative, giving quiet nights and rendering, perhaps, the paroxysms less severe, but having no effect upon the course or duration of the disease. Its administration should be confined to the early stages; in the third stage, when there is abundant secretion from the bronchial mucous membrane, it is not only of no use, but by diminishing the secretion it does harm. As a remedy to relieve pain, it works excellently and can be employed symptomatically against any pain. It is used with excellent effect in colic, especially when opium is contra-indicated, although the removal of the colic is of course the most important treatment. As a remedy for enuresis nocturna, it has been highly recommended by Thomson and Bradbury.

PHYSIOLOGICAL DYSPEPSIA FOR STARCHY FOOD IN INFANCY.

PROSPERO SONSINO.—[*Practitioner*, September, 1872.] If we attempt to feed an infant with the usual aliments of the adult, we find that it suffers very soon in its nutrition and that its life cannot be sustained. This is owing, according to the author, to a physiological inaptitude on the part of the infant to digest any kind of food containing starchy matter. Various conditions coöperate to produce this so-called physiological dyspepsia, and, as first in importance, are cited the various peculiarities in the anatomical conditions of the alimentary canal, which the author minutely describes. The imperfectly developed salivary glands and pancreas, both powerful factors for the conversion of starch into glucin, are also mentioned as contributing to produce this condition. The author reports various experiments upon very young animals from which this conclusion is drawn. From an analysis of the composition of milk, all the organic groups of alimentary principles are present, the hydro-carbons being represented exclusively by a kind of sugar called lactin, which by an insignificant modification is converted into glucin, whereas the starchy principle, a conspicuous ingredient of the diet of the adult, and which needs an elaborated process of digestion to be converted into glucin, the material fit for absorption and diffusion, is entirely absent. The author condemns the tendency of not only mothers but practitioners to feed infants with starchy matters in the form of pap, and quotes Zimmerman, who says, "I know very well that millions of infants are fed with pap, but I know, also, it has killed many hundreds of thousands of them."

Sonsino alludes to the recent discovery of the property of infusion of pancreas to artificially digest starch, but does not believe it advantageous to feed infants with large quantities of starchy food, even if thus previously rendered digestible, notwithstanding that many advocate it as indispensable as fuel for the process of hæmatosis; he thinks this better accomplished by fatty matters, the former being more advanced than the latter in the degree of oxydation.

[To be concluded.]

LITHOTOMY IN A CHILD ONE YEAR OLD.—A case is reported by Dr. Hingston, of Montreal, in the *Canada Medical Record*, of the successful performance of lithotomy in a child aged one year. The stone was hard, and about the size of a pea-nut, and was supposed to have existed from birth.

Reports of Medical Societies.

NEW YORK ACADEMY OF MEDICINE.

Section of Obstetrics and Diseases of Women and Children.

AT a recent meeting of this Section, the following cases were related:—

Diaphragmatic Hernia.—This case occurred in the practice of Dr. Wm. C. Hunter, and was related to the Section by Dr. Ross.

The patient died at the age of ten days. The parents are healthy English people, and they have two living, healthy children. The birth of the child was somewhat protracted, on account of inertia of the uterus, but it was easily terminated by the forceps. The baby seemed well at birth, and nothing unusual was observed in its condition till it was two or three days old, when it nursed with difficulty and seemed to have abdominal pain. There was no vomiting, and the bowels moved regularly. The prominent symptom was excessive dyspnœa, and there was some lividity, especially of the extremities. The diagnosis was, malformation of the heart or large vessels. Death resulted from the dyspnœa and imperfect oxygenation of the blood.

Autopsy, three or four hours after death. Head not examined. About two feet of the small intestine was found occupying the left pleural cavity, having entered this cavity through an opening in the posterior part of the diaphragm. The displaced intestine was pale, resembling, in appearance, that which remained within the abdomen. On making traction from below, the thoracic portion of intestine was readily returned to its normal position. There was, therefore, no constriction or inflammation. The diaphragmatic aperture would easily admit a hen's egg. Dr. Hunter believes that the ligamentum arcuatum externum constituted the border of the aperture, the intestine passing underneath it. The left lung was, of course, in a state of atelectasis, and hence the dyspnœa. The aperture was the result of imperfect development.

Latent Pneumonia.—Dr. Lewis Smith related the following case:—

A boy, six years nine months old, previously well, with the exception of a slight cough, complained, on the evening of Oct. 12th, of chilliness, headache and pain in the left ear. He had played several hours in the afternoon of that day with boys in the street. A few hours afterwards, when I visited him, the pulse was 140 and temperature 105°. The respiration was easy, and only so accelerated as to correspond with the degree of fever. There was no symptom to direct attention to the chest, as the cough was not frequent, and was painless as on other days, and no cause of the febrile movement could be detected on a careful examination. The tongue was dry and furred, and the bowels were sufficiently open. ℞. Tinct. aconit. rad. gtt. i. every two or three hours, according to the fever.

Oct. 13th.—Pulse 136, temp. 105°. Evening.—Pulse 136, temp. $103\frac{1}{5}$°. He is delirious at times, and was considerably so at night; symptoms otherwise the same.

Oct. 14th.—Pulse 128, temp. $104\frac{3}{5}$°. He still exhibits delirium at times, which is most marked at night. Tongue still dry; complains less of headache and earache, and has no pain in the chest; coughs occasionally, but without pain; respiration easy, and but little accelerated. He has moderate thirst and no appetite. To-day, on repeating the examination of the chest, solidification was detected, of small extent, at the summit of the right lung.

Oct. 15th.—Pulse 136, temp. $103\frac{3}{5}^{\circ}$. Evening.—Pulse 118, temp. $102\frac{1}{5}^{\circ}$. Quiniæ sulphat., in doses of about one grain, was to-day substituted for the aconite. The symptoms continued to improve, and by the 17th, the patient was fully convalescent. The delirium ceased on the fourth day, and, during the first few days of convalescence, both pulse and temperature were below normal. On the 18th, the pulse was 56, temperature $95\frac{3}{5}^{\circ}$.

Remarks.—Pneumonia, occurring at the summit of the lung, is not uncommon in infancy, due to extension of bronchial inflammation, but usually, at the same time, portions of the lower, or lower and middle lobes, are also involved. Pneumonia of the apex, not due to extension of bronchial inflammation, nor to the irritation of tubercles, is, on the other hand, comparatively rare, both in infancy and childhood, as it is in adult life. So many cases, however, do occur between the ages of two and ten years, that physicians should always examine the infra-clavicular and supra-scapular regions for its presence in all cases of suspected pneumonia, when the characteristic physical signs are absent in the usual location.

Pneumonia of the apex is, as a rule, on the right side. It is more apt to be latent, and therefore overlooked, than pneumonia of the middle and lower lobes, probably because there is less movement of this part of the lung during respiration, and it is more apt also to be accompanied by cerebral symptoms.

The above case shows the value of clinical thermometry. The diagnosis lay between a symptomatic and essential continued fever. Typhoid fever, of a mild type, was common in the part of the city where the patient resided, and many of the symptoms, it is seen, resembled those of that disease. But typhoid fever never begins abruptly, with so elevated a temperature as was present in this case. Typhoid fever may be excluded if the patient, on the first day, presents a temperature of 105°, or indeed above 103°. Knowledge of this fact probably prevented an absurd diagnosis, and led to a careful examination for a local cause of the symptoms.

Impetigo Contagiosa.—Dr. Smith also related the following case.

Mrs. L. was confined with her second child Oct. 10th, 1872. Her health, that of her husband, and of her first child—now fourteen months old—had been uniformly good, except that she was weaker, and did not have her usual good appetite in the last months of her pregnancy. Mr. L. keeps a fish-store, over which the family live, and the odor of the fish is apparent in the hall and apartments. This fact is stated because it was the only apparent non-hygienic condition. No one of the family, nor the nurse who took care of Mrs. L. and her infant, had previously any cutaneous disease. The older child had been vaccinated at the age of seven months, and none of the family have since been vaccinated.

On Oct. 13th, the baby, now three days old, was observed to have a few reddish maculæ about the neck, which soon developed into flattened vesicles, two or three lines in diameter. Most of these were soon broken, and, on succeeding days, the eruption extended around the neck over the chest, the scalp, and along both groins. In the front of the neck and upper part of the chest it was confluent, so that nearly the entire epidermis, in this situation, was detached. The epidermis only was destroyed, the deeper layers of the skin presenting merely an inflammatory hyperæmia, which disappeared on pressure, and in a few days faded away. The reaction of the liquid which raised the epidermis was alkaline. The largest of the isolated eruptions were perhaps half an inch in diameter, while the majority had the diameter of two or three lines, as already stated. Those which were unbroken formed, as they desiccated, thin, yellowish scales, except on the scalp, where they were thicker and longer adherent. During the first days of the disease there was slight febrile reaction, the temperature being, at one examination, 99°, and the pulse at 140 per minute. The only treatment employed was the frequent application of oxide of zinc ointment, and a cure was effected in about three weeks.

On Nov. 28th, the older child was observed to have a similar eruption, near the groin on one side. The mother thinks that it was communicated from the baby by a diaper. The disease in this case pursued a similar course to that in the baby, but it was much milder, appearing in ten or a dozen places only, and declining in a little less time.

Remarks.—Contagious impetigo has recently received much attention from dermatologists, but there are points of interest relating to it which are still undetermined. It is especially a disease of infancy and early childhood; but adults, who have charge of affected children, sometimes contract it from them, though usually in a mild form. Last spring, this disease occurred among the infants in one of the wards of the Nursery and Child's Hospital of New York, and three of the female nurses contracted it, the eruption occurring in all upon the back of the neck, in two upon the face, and in two upon the scalp. These patients complained of a burning sensation at the seat of the eruption for about four days. The observations made in this institution are interesting, and assist in the elucidation of the disease. Dr. Beckwith, the House Physician, performed four inoculations with the lymph. Two were unsuccessful. The following were the results of the successful experiments. The first case showed an erythematous spot on the fourth day, and a vesicle on the sixth day. No other vesicles appeared on any part of the child. The second case "showed an erythematous spot on the third day, and a vesicle, half an inch in diameter, on the fifth day. Twenty or thirty more vesicles appeared around the point of inoculation, of sizes varying from two to five lines in diameter, and the arm was so sore than it was deemed improper to perform more inoculations."

The statement has been made that this disease is probably not contagious, but that the liquid of the eruption is irritating, so that where it comes in contact with the cuticle it vesicates. Do not the experiments of Dr. Beckwith disprove this? Two of his inoculations produced no eruption, and no inflammation, except that from the incisions, and the redness produced by the lymph in the successful inoculations did not appear till the third and fourth days, and the vesicles one or two days subsequently. How different the result from that of an irritating agent, the effect of which appears within twelve or twenty-four hours. There can, I believe, be no doubt that this malady does possess a contagious principle, whatever its form and nature may be. Dr. Francis Delafield examined microscopically, at my request, the lymph taken from a vesicle a day old, upon the surface of the second of the cases whose history I have detailed, and, though he used a power which he thinks sufficiently high to detect any organism, saw nothing except epithelial cells, somewhat altered by the inflammation. It appears, therefore, that there was no fungus which propagated the eruption.

The point of chief interest in relation to the two cases related, was the mode of commencement and the age of the first patient. It is seen, from the history, that vaccination could have had no influence in determining the outbreak of the disease, and therefore the theory which supposes a relation between the two is not, to say the least, applicable to all cases.

It may be well doubted whether the term contagious impetigo is not a misnomer. This designation was first employed, I believe, by Tilbury Fox, who, in his earliest cases, I am told, examined the eruption as it appeared upon the scalp, where vesicles are seldom seen, and where cutaneous affections, which are in their nature vesicular, assume the form and character of pustules. The eruption in the infant, whose case I have related, I at first supposed to be a mild form of pemphigus, till I saw the close resemblance to Mr. Fox's description of contagious impetigo, and witnessed the propagation to the older child. Dr. Lucius D. Bulkley, who has seen this form of impetigo in the wards of Mr. Fox, visited these patients with me, and confirmed the last diagnosis.

In the *American Journal of the Medical Sciences* for July, 1871, is an abstract of the histories of very similar cases occurring in the city of Halle, Germany, and reported by Drs. Olshausen and Mekus, in the *Arch. f. Gynœcologie,* 1870. These observers designate them cases of *acute, contagious, non-febrile pemphigus in new-born and quite young infants.* They saw six cases at different dates in 1864. "The infants were healthy, strong and vigorous, and the mothers without a trace of lues." Again, in 1869, the disease occurred epidemically in Halle. "The eruption usually made its appearance from three or four to seven days after birth, and lasted from two to three weeks. The pemphigus eruption appeared in the practice of different midwives to a very different extent. In that of five it occurred with great frequency, in that of eight others not at all." These physicians infer from their observations that this eruption is benign, and not dependent on a cachexia, and that "it is always or occasionally contagious, and may then attack older children."

RHEUMATISM IN WHALES.—There is unquestionably a great deal of unknown and unrelieved suffering in the world. If want of sympathy and difficulty of finding relief add much to physical distress, it is sad to think of the new field of woe on the largest scale which Dr. Struthers has discovered in hitherto unexplored regions of pathology. In studying the osteology of whales, he discovered that they are very liable to rheumatism. He has seen many examples of rheumatic ostitis in whales of different kinds. It has been said that animals are not subject to disease until they are brought into connection with man, but this fact contradicts the theory. It is the more remarkable, seeing that whales are less subject than man to variations of temperature. The cold-water treatment does not seem to be efficacious in the cure of the disease.—*British Medical Journal.*

Bibliographical Notices.

Lessons for Children about Themselves. Part. I.—The Body. Adapted to Children under 14 *Years of Age.* By A. E. Newton, late Superintendent of Schools in Washington, D. C. Illustrated.

Popular text-books on physiology belong in the same rank with popular works on natural history or botany, and side by side with Prof. Gray's "How Plants Grow" and "How Plants Behave," could stand a book entitled "Why Folks Breathe," or even "How Men Grow."

As Dr. Gray tells children how one creeper holds on by its leaf-stocks, and another by its tendrils, why should not some physiologist teach children that while we human beings simply swallow our food and digest it as soon as may be, the cow stows away her grass in one stomach till she has time to chew it over for the digesting stomach, while a lower animal still saves all trouble of hands and teeth by letting its food pass directly through the walls of its own body.

To make physiology interesting, we have only to explain it in a way comprehensible to children. The description of one organ will lead to questions about another, and, in fact, children will study physiology exactly as medical students study it, except that the former require more familiar illustrations and explanations adapted to their smaller range of experience.

By no means on this plan, however, is the book written, which, under the unpretending title "Lessons for Children about Themselves," attempts to teach a great deal of physiology, a great deal of good morals, a considerable amount of metaphysics, together with certain opinions which the writer lays down as unquestionable, but which would not be assented to by the majority of the Christian world.

Written in the form of questions and answers, the answers are seldom suggested by the questions, for which, in many cases, numbers—1, 2, 3, &c.—might as well be substituted, so that while the answers are such that they would practically have to be learned by rote, the questions must also be learned by rote or they will be useless.

The manner in which expressions are put into the mouths of children while they still can mean nothing to them, is well illustrated by the use made of single words. "Is it well to drink much while we are eating?" "It is not. Much liquid dilutes the fluids of the mouth and stomach so that they are not strong enough to do their work well." "What do you mean by dilutes?" "Makes thin and weak." [P. 33.]

If these "Lessons" are intended for children who do not understand the meaning of "dilute," why not say in the beginning that water makes the fluids of the mouth and stomach thin and weak?

We question whether it is desirable to load a book on physiology with moral advice, for one cannot help feeling some doubt whether this advice does much good if it is manufactured out of every stick and stone by the roadside and hurled in the children's teeth; and this is especially the case if the arguments are not convincing. If a father is manly, accomplished and graceful, agreeable and affectionate to his family, when his son sees him talking cheerfully over his after-dinner cigar, of what force will be the closing sentences of the chapter on tobacco? "Must it not be a terrible thing to be a slave to such a filthy and poisonous weed?" "What do you think is the best way to keep out of its power?" "Here is what one little boy said about it:—

> "I'll never use tobacco, no!
> It is a filthy weed;
> I'll never put it in my mouth
> Said little Robert Reid."

The physiological part of the book is derived from the works of Dalton, Huxley, Youmans, Parton, Fiske and others, from which passages are frequently quoted. Those taken from the "Mental Cure," by Rev. W. F. Evans, do not add to the scientific value of the book. P.

The Mother's Register: Current Notes of the Health of Children. From the French of J. B. FONSSAGRIEVES. New York: The Nation Press. 1872.

THE Mother's Register is a book for popular use, but of a very different character from the preceding, being arranged on a scientific plan, yet so simply and clearly that no mother will fail to understand it and put it into use. She has only to fill up from time to time the blank spaces with a letter here and a number there, in order to make a record of her child's life, which will be full and accurate. Mothers will be much interested in keeping this record and in comparing the records of different children, while physicians will find it valuable, not only in case of sickness for obtaining an accurate account of the past history of their patients, but also in making up statistics of subjects which do not ordinarily come under the doctor's supervision. Definite knowledge, for instance, with regard to the amount of influence which the teeth, at the moment of their appearance above the gum, exert on the rest of the system, might clear up some of the mysterious ideas which, in the minds of most people, hang about the period of dentition.

The translator has done well to add to the Girls' Register blanks for "Physical Exercise and Strength" and "Mental Exertion," which in the French edition were only used for boys. The translation seems to have been made very faithfully, and only once has the translator, who is not a medical man, given his own views on medical subjects. The author says "Swelling of the tonsils seriously affects the hearing, the expression of the face, the sound of the voice, the development of the chest. The question of an operation should be early considered." And the translator's opinion, added in brackets, that "the theory and practice of the homœopathists, who oppose an operation, seem here more reasonable to the translator," is of less value than it might have been had the translator given his reasons for holding this opinion. P.

Half-hour Recreations in Popular Science. Nebulæ, Comets, Meteoric Showers, and the Revelations of the Spectroscope regarding them. By PROF. H. SCHELLEN and others.

Coral and Coral Islands. By PROF. J. D. DANA. Boston: Estes & Lauriat. Pp. 143 to 190.

THE serial before us is an interesting one, containing, as its title denotes, a scientific description of subjects of general interest for the benefit of popular readers.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, JANUARY 30, 1873.

We pointed out in the last number the financial success of the new system adopted by the Harvard Medical Department. The deficit was but a little over a thousand dollars, while the number of students was diminished nearly one-third. With anything like a return to the old numbers, which, when the advantages of the system become more apparent, is reasonably to be expected, the receipts will undoubtedly far exceed those of former years, thereby enabling the University to elaborate a system which has thus far been but imperfectly developed. It has been very generally supposed that the changes effected consisted simply in properly systematizing the course of instruction and in allotting to each of the three years their appropriate studies. This is but a small part of what has actually been accomplished. With a greatly increased standard of excellence required at the examinations, the opportunities for study have been much more extensively enlarged than the profession generally have any idea of, and Harvard College is rapidly perfecting to-day a course of study which promises soon in point of completeness to rival that of some of the best medical schools of Europe. The brief advertisement on the first page is to call the attention of those having completed their very short and hurried three years' course of study, or perhaps it may be of the still more hurried eighteen months of cramming at some of the New York or Philadelphia schools, to what can be done towards making themselves properly educated medical men. We beg them to pause and read it before they undertake to risk the lives of their fellow-men in their own unskilled hands. The standard of medical education has thus far been a disgrace to this country, and we trust that the work of reform so brilliantly inaugurated by Harvard will soon be taken up by other prominent medical schools. The remarks of President Eliot upon this subject are so excellent that we cannot help reproducing a large portion of his report.

"It is to be regretted, nevertheless, that the Medical School is not sufficiently endowed to make it practically independent of the number of its students. It would be difficult to overstate the importance of the effort which this single school is making, with no support except the approval of the profession, to improve the system of medical instruction in the United States. The ignorance and general incompetency of the average graduate of American Medical schools, at the time when he receives the degree which turns him loose upon the community, is something horrible to contemplate, considering the nature of a physician's functions and responsibilities. The early mistakes of a young lawyer or a young minister are no great matter; not much is staked upon his skill and wisdom, and the community does not suffer irremediable losses and multiplied miseries, if novices in these professions are left by the schools in such a condition that they have to learn some pretty elementary lessons by practice. In the medical profession it is far otherwise. The mistakes of an ignorant or stupid young physician or surgeon mean poisoning, maiming and killing, or, at the best, they mean failure to save life and health which might have been saved, and to prevent suffering which might have been prevented. The effect upon the community of allowing the great mass of young physicians to learn the rudiments of their art by practising it, can only be compared to the effect upon an army in the field of officering it with men who have to learn the elements of the art of war by practice in the face of the enemy. This comparison does not exaggerate the evils of the prevailing system of medical instruction in this country. The Harvard Medical School has successfully begun a revolution in this system. A liberal endowment of the school would insure the complete success of the undertaking, and would encourage other schools to imitate the good example. There is no department of the University upon which money can be more worthily or more usefully bestowed; none in which endowment funds would have more immediate or more lasting effects to advance learning, and to relieve the sufferings and promote the happiness of mankind.

The students availed themselves of the new facilities of the school in the best spirit. The chemical laboratory was crowded, the large and excellent microscope room was in constant use, the practical instruction in anatomy was systematized and made very effective by the devoted labors of the demonstrator and the assistant demonstrator, and a new ardor and a keener attention were manifested in the lectures and recitations.

THE SMALLPOX EPIDEMIC in Boston and vicinity is manifesting a decided decadence. Many causes are contributing to this happy result; and whether we give most credit to the new Board of Health for it, or attribute the decline to the natural course of things, the fact is equally gratifying.

The Board of Health do not mean to leave any measures untried to promote the sanitary welfare of Boston, both in dealing with smallpox and in the general interests of the public health. One of the latest measures of the Board is the appointment of a corps of medical inspectors, who will aid very materially in executing sanitary measures. The immediate business of this corps is to superintend general vaccination and re-vaccination throughout the city, and to be responsible for its thorough, systematic and efficient performance.

The following gentlemen have accepted the position of medical inspector in this corps:—Drs R. M. INGALLS, A. E. MCDONALD, E. N. WHITTIER, D. F. LINCOLN, W. H. H. HASTINGS, F. B. GREENOUGH, H. S. EVERETT, J. L. HALE, W. E. BOARDMAN, A. M. SUMNER, F. W. DRAPER, A. H. WILSON, F. W. GOSS, A. H. NICHOLS, E. T. WILLIAMS, W. P. BOLLES.

Correspondence.

"IN-FLESHED" TOE-NAIL.

MESSRS. EDITORS,—In the winter of 1851–52, Carl Castlehun, a German student of medicine who was then attending my lectures in the University of Michigan, described to me an operation which his father was in the habit of making for inverted toe-nail. The operation was the identical procedure given by Dr. Cotting for "*in-fleshed*" toe-nail in the last number of your JOURNAL. I have made the operation repeatedly, both in public clinics and in private practice, and can bear testimony to its value in an "*in-fleshed*" condition of the nail; but in an *inverted* condition of the edge of the nail it often fails. In such cases I have resorted to a complete extirpation of about one quarter of the nail *and matrix*, thus diminishing the width of the nail by the measure of the faulty portion. MOSES GUNN.

Chicago, *Jan.* 15, 1873.

RE-UNION OF PARTS.

MESSRS. EDITORS,—In the JOURNAL of the 9th inst., "Hay Cutter" asks: "Can parts completely dissevered be united?" Generally the answer would be, No. A surgeon, or some person of good common sense, and with presence of mind, must be on the spot at the time of the accident.

In the autumn of 1857, my son, then two and a half years of age, came in the horse barn as I was cutting hay for one of my horses, and the fog and gathering darkness was so thick and foul that I scarcely noticed his presence until a cry of pain indicated the injury. I lighted a match instantly and at once found the first or distal joint of the index finger and a portion of the second joint in the cut hay. Most of the first joint of the second or middle finger was hanging by a simple, narrow strip of skin.

I replaced the amputated members at once, wrapping them in my handkerchief until I could reach the house, some two hundred feet distant, when I dressed them with light splints and ordinary adhesive plaster. I used afterwards the *fir balsam*. They united ; and with the exception of a slight augular deformity of the index finger, are perfect now.

My success in other cases has not been at all favorable. The circumstance or fact may be due to the time which had elapsed after the injury, before surgical aid could be obtained. B.

HAY FEVER.

MESSRS. EDITORS,—I was much interested in reading your extended notice of Dr. Morrill Wyman's book upon Autumnal Catarrh, a summer complaint known as hay fever or hay asthma, pointing out the only remedy or cure, a certain place or locality (for resort) in the White Mountains known as Franconia Notch or at the Glen House—not daring to go away from the spot more than six miles, if so the terrible malady is liable to return. Allow me to recommend to him and the profession at large a much larger scope of country for their patients, hundreds of miles square—the Rocky Mountain district known as Colorado, extending from crossing of the Union Pacific Railroad in the Black Hills to Mexico from north to south, and from east to west some three hundred miles, and that without the necessity of fleeing to the mountains if the patients prefer to live on the plains. There never has been a case indigenous to the climate, nor a case that came here for relief that was not cured as by miracle. No one need ever fear as August makes its yearly rounds that he will be re-attacked by his old enemy Hay Asthma. Very respectfully, W. F. MCCLELLAND, M.D.

Denver, *Jan.* 17th, 1873.

Medical Miscellany.

BOSTON DISPENSARY.—Dr. A. L. Haskins has been appointed Superintendent, *vice* Dr. S. A. Green resigned.

Dr. C. IRWIN FISHER has been appointed Port Physician of Boston, to succeed Dr. Durgin, who has become a member of the Board of Health.

WE are in receipt of the first number of the *Irish Hospital Gazette*, a bimonthly journal. Its hospital and society reports are carefully prepared, and contain much interesting reading. A number of well-known names are to be found among the contributors to the first number, which is in every respect creditable to its originators, and we wish it success most heartily.

EXTRACTS IN POWDER.—It is sometimes very desirable to administer the solid extracts (say *extract of hyoscyamus*) in the form of a powder.

All such extracts may be reduced to fine powder by patiently rubbing them (say two or more hours) in a mortar with an equal quantity, by weight, of calcined magnesia.

Extract of gentian yields the slowest to this manipulation.

HOPS AS AN EXTERNAL APPLICATION.—If possessed of any virtue as an anodyne, and popularly hops have great reputation as such, the effect is best obtained by *steaming* a muslin bag full of them, on the side to be applied to the body, until quite soft and damp—not wet.

The ordinary method of wringing out in hot water wastes all the strength of the hops, and makes a nasty mess of it.

THE *New York Medical Record* says:—This city is the acknowledged medical centre of the United States. Over one thousand medical students are distributed in the three well-known medical colleges, viz., Bellevue Hospital Medical College, College of Physicians and Surgeons, and Medical Department of the University of the City of New York.

This statement is certainly true as regards the number of students. Ought not the "medical centre" of the country to offer the highest standard of medical education ?—EDS.

A WITNESS NECESSARY IN THE ADMINISTERING OF ANÆSTHETICS.—A London correspondent of the *Dental Cosmos*, of Dec., 1872, mentions the recent charge of indecent assault by Caroline Pope, a servant, against Jas. T. Grant, dentist, at the Jersey (Channel Islands) police court. She states that "gas" was given to extract a tooth, and while she was under its influence he grossly outraged her. There was no evidence of a rape having been attempted, and many witnesses gave the dentist the highest moral character. He was admitted to bail in the sum of £250 for future trial. This case illustrates once again the extreme danger of administering anæsthetics to women without the presence of a witness.—*Med. Record.*

THE USE OF ETHER AS AN ANÆSTHETIC.—The Liverpool correspondent of the *British Medical Journal* writes:—The use of ether as an anæsthetic appears to be gaining ground in Liverpool. Although we have been singularly fortunate here in avoiding accidents from chloroform, the profession have no doubt been strongly impressed by the statements published in the Journal and elsewhere, and seem disposed to give the original anæsthetic a fair trial. We have lately seen ether administered in several operations, capital and minor, and in the lying-in room. In every case it has completely succeeded, its action being, in all respects, as satisfactory as that of chloroform, with the additional advantage of causing no tendency to sickness. The principal drawback appears to be the large quantity of ether required.

The University of Vienna and Dr. von Pettenkofer.—It has recently been decided to institute a new Chair of Hygiene in the University of Vienna ; and Dr. Max von Pettenkofer, well known for his researches on the diffusion of cholera, and generally as one of the highest authorities in Germany on sanitary matters, has been invited to occupy the professorship. Until lately, there was a hope that he would accept the proposal. He has, however, declined to leave the present seat of his labors, Munich. This decision is said to be the result of certain concessions which have been made to him in Munich, and also of the direct intervention of His Majesty the King of Bavaria.—*Ibid.*

NOTES AND QUERIES.

The Works of Benjamin Waterhouse. *Messrs. Editors,*—I am very anxious to procure a copy of two pamphlets on the "Kinepox," written by Prof. Waterhouse and published in 1800 and 1810. I am also desirous to ascertain whether the papers of Dr. Waterhouse are in existence, and, if so, who is their custodian ? ⁂

We are not in possession of any information concerning the matters alluded to; if any of the readers of the Journal can answer the inquiry, we shall be obliged to them if they will do so.—Eds.

Were the cases of death from vaccination in the last number of the Journal cases of first or re-vaccinations ? Point.

Erratum.—The report of thirteen cataract operations by Dr. Williams at the City Hospital, published in last week's Journal, apparently under the head of "congenital cataract," should have been designated as "Extraction of Cataract by the New Method."

Pamphlets Received.—Half-Hour Recreations in Popular Science. Part 6. Unconscious Action of the Brain and Epidemic Delusions. By Dr. W. B. Carpenter, F.R.S., &c. Boston. 1873. Pp. 191 to 254.—Transactions of the Wisconsin Academy of Sciences, Arts and Letters, 1870-72. Madison, Wis. 1872. Pp. 200.—Letter from the Secretary of War, communicating, in obedience to law, information in relation to Quarantine on the Southern and Gulf Coasts. Pp. 117.—The Natural Cure of Disease. Synopsis of a Lecture delivered before an Association of Physicians of Brooklyn, N. Y. By Prof. Sam'l G. Armor, M.D., of the Long Island College Hospital. Pp. 8.

Married,—In Haverhill, 16th inst., Oscar D. Cheney, M.D., to Miss Sarah S. Hunking, both of Haverhill.

Died,—In this city, 27th inst., Francis A. Willard, M.D., 64.—In Natick, Jan. 9th, Geo. C. Lincoln, M.D., aged 51 years.

Mortality in Massachusetts.—*Deaths in fourteen Cities and Towns for the week ending January* 18, 1873.

Boston, 178—Charlestown, 14—Worcester, 23—Milford, 5—Chelsea, 9—Cambridge, 12—Salem, 9—Springfield, 2—Lynn, 13—Gloucester, 8—Fitchburg, 3—Newburyport, 4—Somerville, 3—Haverhill, 5. Total, 288.

Prevalent Diseases.—Smallpox, 60—consumption, 48—pneumonia, 24—scarlet fever, 17.

The deaths from smallpox were as follows:—In Boston forty-five, Charlestown seven, Gloucester three, Worcester two, Cambridge two and Salem one. Of the deaths from scarlet fever ten were in Boston, three in Worcester and three in Cambridge.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, January 25th, 153. Males, 81; females, 72. Accident, 1—apoplexy, 4—anæmia, 1—burned, 1—bronchitis, 5—disease of brain, 3—cerebro-spinal meningitis, 1—cancer, 2—consumption, 20—convulsions, 3—croup, 3—debility, 1—diarrhœa, 1—dropsy, 1—erysipelas, 1—frost-bite, 1—scarlet fever, 11—typhoid fever, 8—gangrene, 1—gastritis, 1—disease of heart, 7—hernia, 1—infantile, 3—disease of kidneys, 2—congestion of the lungs, 2—inflammation of the lungs, 10—marasmus, 1—old age, 3—paralysis, 3—rheumatism, 1—puerperal disease, 2—pyæmia, 1—pelvic inflammation, 1—scrofula, 1—smallpox, 35—teething, 2—unknown, 7.

Under 5 years of age, 45—between 5 and 20 years, 18—between 20 and 40 years, 46—between 40 and 60 years, 25—over 60 years, 19. Born in the United States, 100—Ireland, 35—other places, 18.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

HOUSE-DRAINS.

By GEORGE DERBY, M.D. Harv.
Prof. of Hygiene, Harvard University.

By the use of water-closets and their attendant conveniences of fixed wash-bowls, and bathing-tubs and kitchen sinks, our city houses are brought into close communication with the sewers, and their occupants are thereby exposed to special dangers.

Whatever gases are contained in these underground passages seek not only to diffuse themselves under the law of nature with regard to gaseous bodies, but are also frequently subjected to severe pressure. These gases are dangerous to health. What the specially noxious element in them is no one can define. It is evidently neither carbonic acid nor sulphuretted hydrogen, nor any other of the gases with which chemists are familiar in the laboratory. There is something beyond all this, coming from the decay of organized substances in a closed, pent-up position, without the free access of light and of air, which at times gives rise to the most virulent poison, and to the most destructive forms of disease.

The sensible properties of sewer-air are quite remarkable. It is by no means fœtid, as many people suppose, neither is it pungent or ammoniacal. It is rather negative in character, faint in odor, mawkish, smelling perhaps more like soap than any other familiar substance.

Sewer-air may escape very freely in our dwellings before its presence will be suspected, and that this happens very often there can be no sort of doubt. There are many reasons for this belief. One cause for such escape, and a very active one, is found in the difference of temperature between the interior of our houses and the interior of the underground sewers. A rarefaction of air and an upward current are thus induced. The joinings of the soil-pipes are imperfect from alternate expansion and contraction by exposure to hot and cold water, and, unless a free and safe vent is provided above, there must be leakage at these points.

The air of the sewers is also subject to pressure from the sudden influx of water in rain-storms, and in seaboard towns from the action of the tide. In Boston, all or nearly all the outlets of the sewers are below the level of the sea at high water. As the tide rises, it displaces sewer-air, which is pressed inwards, and must inevitably escape at some of the sewer inlets. There can be no doubt that the rain-water conductors often serve the purpose of conveying safely away the imprisoned air thus seeking a vent*—an office not generally thought of in their construction. But their usefulness in this way depends upon their being left untrapped, which is not always the case. Frequently, instead of passing directly to the principal house drain without obstruction, they enter a water-sealed cesspool. But the rain-conductors, while sometimes acting as drain-ventilators, are inoperative when the house-gutters and pipes are filled with water in a heavy rain-storm. Neither do they relieve the pressure on the soil-pipes within the house caused by expansion of the enclosed air by heat. We have then remaining only the water traps of sinks, bath-tubs, wash-basins and water-closets as defences against the air of the sewers. There is, however, another risk to which the health of the family is exposed through these contrivances, in addition to those which come from upward pressure, or from defective construction of the traps, or from unsoldering of their connections of iron and lead, or from their corrosion and decay by time and use. Whenever a large amount of fluid is thrown down the soil-pipe, whether from the bath-tub or any other opening, the tendency is to the formation of a vacuum behind it, and atmospheric pressure causes a suction upon every trap which is at a higher level. This may be shown at any time by pouring down a bucket-full of water and observing the commotion which ensues in all the traps above it. It not unfrequently happens that the water of the trap is in this way sucked or "syphoned" out, and the pipe consequently remains open to the sewer, and the trap empty until filled again by the next use of the water.

There is also an obvious escape of the air of the soil-pipe corresponding with its constant daily use. Whenever fluids are introduced, a certain amount of air is displaced, and must go somewhere. Unless other vent is provided, it flows directly upwards.

For all these reasons we would advise giving the whole drainage plan of a dwelling the freest possible communication with the outer air at a point so elevated that the sewer gases cannot fail to be diffused and got rid of. This can readily be done, while building, by carrying the soil-pipe, made of iron, at full size through the roof, and leaving it open like a chimney. By this arrangement, all stagnation is prevented; the contents of the house-drains are constantly exposed to the oxidising and purifying influence of currents of air; when rain-conductors are filled with water there is still free escape for the sewer gases; and the water traps throughout the house are relieved from pressure both of the pent-up sewer air on the one side, and of suction, or atmospheric pressure, on the other.

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* This fact was noticed by Dr. Francis Minot in the Boston Medical and Surgical Journal Jan. 28, 1854.

In houses already built, a lead pipe may be readily carried from the highest point of the soil pipe directly through the roof—but the larger the pipe and the straighter its course the better. In one instance, at least, where this latter plan has been adopted, a constant current is found to flow outwards through the pipe.

102 *Charles Street, Jan.* 1873.

CYST OF THE POPLITEAL SPACE, COMMUNICATING WITH THE KNEE-JOINT, AND DESCENDING BY GRADUAL DISTENTION TO THE CALF OF THE LEG.

By W. C. B. Fifield, M.D. Harv.

J. B., machinist, aged 60, has had, for the last twelve years, chronic synovitis of both knee-joints. He was for a very considerable time at the Massachusetts General Hospital without receiving any benefit, and was discharged as incurable. He then came under my care as a private patient.

Both knees, being greatly distended with fluid, were punctured in October, 1868, with a common trocar, and the liquid, amounting to some ounces, drawn off. They were then injected with equal parts of tincture of iodine and water. This proceeding was repeated three times, the last time tincture of iodine of full strength being injected. Some pain and inflammation followed, but not enough to cause a radical cure.

In the summer of 1870, after a slip made on the stairs, he noticed, for the first time, a small, rounded tumor in the left popliteal space, and soon afterwards another in the right. That of the left increased very rapidly in size, so that in the autumn of 1870 it extended between seven and eight inches below the joint, entirely across the upper back part of the leg, and was more than twice as large as the fist, smooth on the surface and distinctly fluctuating.

I punctured the tumor, obtaining a good deal of oily liquid, and some masses resembling bits of hard, yellow fat came through the canula. Violent pain followed, the patient became typhoid, and three days later I laid the whole cyst open from one end to the other. The same oily liquid escaped, together with handfuls of hard, yellow masses, having the odor and appearance of commencing gangrene. On the following morning the typhoid condition had passed away. The extensive wound healed by granulation in a sufficiently short time.

At the expiration of three or four days from this operation, the knee-joint became exquisitely tender and painful, the patient again becoming typhoid and prostrated. A free incision was therefore made in the joint, evacuating thereby a quantity of pus. Again the patient rallied, the health became re-established, and, although the joint continued to discharge pus, by occasional injections of tincture of iodine the discharge ceased. The limb, having been kept in a straight position, was now strongly flexed, and the fibrous adhesions yielded with an audible tearing sound. The patient, being an ingenious man, contrived an apparatus for alternately flexing and extending the limb, and eventually recovered with a very useful leg.

In the winter of 1871–72, the cyst in the right popliteal space having attained a large size, and the knee-joint being greatly swollen, I made an incision into the cyst. After evacuating the liquid, free bleeding took place from the edges of the cyst, and it being impossible to find any vessels to tie, it was finally checked by the use of a solution of ferric alum. The knee-joint was now injected (directly, and not from the cyst) with tincture of iodine of full strength without effect, although the injection was allowed to remain in the joint. A seton was passed through the joint and allowed to remain twelve hours. At first this seemed ineffectual in exciting inflammation, but at last characteristic pain and tenderness appeared, and the joint was laid open with the knife. This time some troublesome hæmorrhage occurred from the edges of the cut. Suppuration became freely established, and, soon after, the cyst in the ham inflamed, broke and discharged abundantly, thus reversing the case of the first joint and cyst.

The patient speedily recovered, and now has two useful legs.

I make the following quotation from Richet's *Traité d'Anatomie Médico-Chirurgicale:*—

"The popliteal region is frequently the seat of tumors, particularly cysts and aneurisms. Serous cysts may be developed either in the numerous bursæ that are here met with, or in the accidental bursæ that arise in the sub-cutaneous or sub-aponeurotic cellular tissue. Some of them evidently originate in the articular synovial membrane, and I have for a long time preserved a preparation upon which is seen the pedicle of a cyst, which, filling a part of the popliteal space, extends into the articulation through the fibres of the posterior ligament."

Harrison Square, January 13, 1873.

THE BRIDAL TOUR IN A HYGIENIC LIGHT.—The practice of departing on a journey immediately after marriage may involve some evil consequences. Travel, besides inducing constipation directly, interferes with the convenience of regular defæcation, which is a habit essential to health. The most serious results may follow constipation produced in this way. A case is reported in a French journal of a young married lady who had no relief of the bowels during two weeks of travel on a bridal tour, and who lost her life by the peritoneal inflammation which ensued. There are other considerations that will suggest themselves, having reference to the functions of the uterus, and leading to the conclusion that the "bridal tour" is not consistent with the laws of health, and might well be abolished.—*Pacific Med. and Surg. Journal.*

Progress in Medicine.

REPORT ON DISEASES OF CHILDREN.

By D. H. Hayden, M.D.

[Concluded from p. 113.]

On the Use of Pancreatic Emulsion in the Wasting Diseases of Children.

Horace Dobell, M.D.—[*Practitioner,* October, 1872.] The author proposes this remedy for that wretched form of atrophy, debility and marasmus in children, where every part of the body wastes away except the abdomen, the state described by Dr. Druitt in his *Vade Mecum* in the following few and graphic words: "Emaciation and voracity; the belly swelled and hard; the skin dry and harsh; the eyes red; the tongue strawberry colored; the breath fœtid; the stools dark colored and offensive; the bowels sometimes costive, sometimes extremely relaxed; the patient usually dies hectic." The author desires to bring prominently forward that this state, provided there is no advanced lung disease, is rapidly cured by pancreatic emulsion given in doses of a teaspoonful every four hours, and regularly persisted in until fat and flesh are restored. It is, of course, necessary that a proper diet should be insisted upon at the same time, but proper diet without the pancreatic emulsion will not do. In addition to the stress laid upon the influence of the salivary and pancreatic juices upon the digestion of starch in Dr. Prospero Sonsino's paper, the author says we must not forget the action of the pancreatic juice upon fat, and it is probable that the two functions of the pancreas are sufficiently independent of each other that they may act separately. As shown by experiments, in addition to the action of the pancreas upon fats, it has the power to convert starch into glucin by simple mixture, and this property remains to a certain extent after the pancreas has exhausted its power of acting upon fat. It is possible, therefore, that in different states of depraved health, the one or the other of these properties may be deficient. It is evident that when the power of digesting fat fails to be developed at the proper time, the defect must tell with double force upon children already suffering from deficient digestion of starch.

The children who become the subject of the kind of wasting now spoken of are especially: (1) those suckled by mothers whose milk, though abundant, is extremely deficient in nutritive properties; (2) those brought up by hand; (3) those who, at a later period of childhood, have been subjected to similar chronic defects of diet. It is especially when the mother's milk is poor in fat and lactin that the child becomes dissatisfied and craving; and, in the majority of cases, it is this that first leads to the introduction of farinaceous food under the popular nursery belief that it is satisfying. As Dr. Sonsino says, if this is given before the power of digesting starch becomes established, of course nothing but mischief can be the result. In the same way that the mother is deprived of fat elements by lactation so is the child deprived of them by persistency in a diet deficient in milk. The injury is a double one, first by cutting off the supply of fat elements necessary for the protection of the tissues, secondly by paralyzing the functions of the pancreas by prolonged inactivity. This latter is a point the author thinks deserving great attention, and thus accounts in great measure for the impossibility of restoring those ill-nourished, wasted children by any kind of natural diet after they have been allowed to remain in a chronic state of defective nutrition. The author cites three of the very numerous cases where he has seen pancreatic emulsion administered followed by almost magical recoveries. No amount of milk or cream will take the place of the emulsion, the explanation why, notwithstanding milk is also an emulsion of fat, the author thinks turns upon the following points: (1) The fineness of the particles of fat in the pancreatic emulsion; (2) the permanent character of the molecular mixture; (3) the fact that different fats in the pancreatic emulsion, consisting, principally, of stearine, margarine and palmatine, have a high melting point, thus differing from the fat of milk, oleine, which has a low melting point.

DISEASES OF THE EAR IN CHILDREN.

DR. JULIUS BÖKE.—[*Jahrb. f. Kinderheilk.*, December, 1871.]—The author gives, in this article, the result of the treatment of eighty-four children for diseases of the ear. Diseases of this organ must be of great interest to all physicians engaged in the treatment of children, owing to the more injurious effects left behind than in cases of adults, the same pathological changes, which causes only deafness in the adult, preventing the child from learning to speak or to understand language, the development of the mind being checked, and many children having become deaf and dumb merely from neglect of diseases of the ear existing in earliest infancy. Pathological changes often cause such complications of symptoms as to render the diagnosis very difficult, sometimes impossible, without examination of the ear. It is not rare that loss of consciousness and high fever are caused by a collection of matter in the tympanum, the symptoms disappearing with its escape.

From the peculiarity of the anatomical structure of the ear in infancy, minutely described by the author, great care is necessary both in examination and treatment. Up to the end of the first year, great caution is required in the use of the syringe; in such cases, cleaning with pledgets of lint being preferable. Diseases of the external meatus in children up to seven years old are more frequently primary than secondary, after which age they are generally complicated with disease of the tympanum, and it is then difficult to decide which was first affected. It frequently happens that inflammatory symptoms make their appearance in the external ear passage simultaneously with the breaking through of a tooth. The treatment for external otorrhœa recommended is to wash out the external meatus with luke-warm water, or, if the secretion is very abundant, to use several pledgets of lint for cleaning the same. In many cases this suffices to cause the disappearance of the discharge in eight days. When this does not happen, the author uses a solution of plumbi acetatis, gr. ij., ad aquæ, glycerinæ āā ℥ss., after each washing, five drops being dropped into the ear.

Foreign bodies in the ear rarely cause of themselves any particularly bad effects, such, when ensuing, being much more attributable to suppuration set up by too rough attempts for their removal. Removal should be attempted in the most gentle manner, and the best means is syringing with luke-warm water.

Inflammation proper of the middle ear, that is, where the discharge is purulent as distinguished from simple catarrh, was always ushered in by high fever, and sometimes severe cerebral symptoms preceded the appearance of the discharge. The treatment of suppurative otorrhœa in the middle ear, where of only few days' duration, consisted in syringing out the ear once to thrice daily, according to the amount of secretion; more frequent syringing or the use of astringents proved injurious. When suppuration had existed for any length of time, astringent solutions (zinci sulph., tinct. ferri muriatis, alum) were employed. Polypi were touched with argent. nit. The lapis, he employs previously melted in a porcelain dish and, to the size of a hempseed, hardened upon the end of a probe; also, in such cases, blowing in powdered alum has proved useful. The average duration of treatment was six weeks, the perforation of the membranum tympani not always having cicatrized in this time, this sometimes not taking place for several months after the cessation of the discharge. Catarrh of the tympanum occurred always in connection with tonsillitis or nasal catarrh, and disappeared simultaneously with the cure of these.

On Erysipelas in earliest Infancy.

H. J. Abelin.—*(Schmidt's Jahrbuch.,* 1872. No. I.)—The author admits three forms of erysipelas found in infants. The first form, which makes its appearance shortly after birth, is the most dangerous, and appears to stand in some relation with a blood poisoning of the mother dependent upon puerperal disease. The second form, affecting children between two months and one year of age, traumatic erysipelas, is the mildest of the three diseases, its course is a favorable one, and it remains limited to the neighborhood of the injured spot unaccompanied by any severe symptoms. The third form, the so-called wandering erysipelas, makes its appearance without any demonstrable internal or external lesion, and has a disposition to spread rapidly over the whole surface of the body or over large portions of the same; the skin is not only reddened, but is swollen and has a shiny appearance; there is always high fever. From the manner of its appearance, this form is evidently one symptom only of a general blood disease. The circumstance that no benefit is derived from local remedies speaks also for this explanation, a favorable result being obtained only by internal treatment with tonics and other constitutional remedies. The author recommends very strongly the use of the hot bath, which is followed by a rapid lowering of the temperature and diminution of pain, and he is of the opinion that, when used at the commencement, the extension is in a great measure limited; the respiration, also, becomes deeper and easier and the pulse slower. Abelin's method of using the bath is to place the child in a tub and slowly pour over it water at 38° C., then gradually adding hot water until the temperature reaches 40–42° C. In accordance with the age and strength of the child, as also with the effect produced, it is to remain from fifteen to thirty minutes or longer in the water, is then wiped dry, and is to lie wrapped in a warm blanket for one or two hours; in severe cases the bath to be given twice daily, in light cases but once, and this treatment is continued until convalescence commences. The author cites three cases in corroboration of the benefit of the above treatment.

USE OF QUININE IN FEBRILE DISEASES OF CHILDREN.

E. HAGENBACH.—[*Jahrb. fur Kinderheilk.*, March, 1872.]—The author's object in this communication is to prove the favorable action of quinine in reducing the temperature in febrile diseases of children, by which means the disease is rendered a milder one, and in many cases complications of troubles of the nervous system and respiratory organs are prevented. He uses quinine in typhoid fever, and in all the various febrile diseases, when the temperature is continuously high for several days; he combines it with baths between 20° and 24° C., repeated every three hours as long as the temperature remains above 39° C. In pneumonia, he uses baths with older children, with smaller children wrapping in cold sheets is often preferred as less dangerous; at the same time he gives quinine. Scarlatina, the author treats almost exclusively with baths and quinine. This treatment has also been used with good effect in his later cases of erysipelas. Other diseases enumerated as so treated are acute rheumatism, acute periostitis, coxitis with high fever, and several other surgical diseases. It is the combined action of the bath and of the quinine that the author lays stress upon. The quinine is given in one large dose, or in two smaller doses at half-hour intervals, and when the temperature is below 39° C., it is left off. No bad after-effects were noted. The amount to be given varies with the age. For children between one and two years old, from five to sixteen grains; between three and five years, from eight to sixteen grains; between six and ten years, from ten to twenty grains; between eleven and fifteen years, from ten to thirty grains. The largest doses are generally to be preferred. The beneficial effects upon the sensorium, the circulation, subjective symptoms, &c., by baths, cold wet sheets and quinine are, beyond doubt, as great in children as in adults, the strength is better kept up and convalescence hastened. Appended is a thermometric table of several of the cases thus treated.

ON THE USE OF QUININE IN WHOOPING COUGH.

A. STEFFEN.—[*Jahrb. f. Kinderheilk.*, N. F. iv. 2; *Schmidt's Jahrb.*, 1872, No. 32.]—Since the autumn of 1868, Steffen has used quinine in various cases of pertussis convulsiva, and generally with good result; in some cases, on the contrary, there was but slight effect, or none at all. On an average, he gave children between two and five years old, eight to sixteen grains within twenty-four hours. In one case, where the child could not be made to take the medicine, it was used in enema, nine being given in the course of three days, each containing half a drachm. The author reports two cases where the action of quinine seemed quite remarkable.

CHOREA.

[*Schmidt's Jahrbuch*, 1872, No. 5.] Dr. Oxley [*Liverpool Med. and Surg. Rep.*, ii. p. 24, Oct., 1868] reports twenty-one cases of chorea in the Children's Hospital in Liverpool. His statistics embrace, in all, forty-one cases. Of these, sixteen were boys and twenty-five girls. The majority of boys were under ten years of age; the girls between ten and twelve. In eight cases, the cause was fright and anxiety; in four there was a complication of heart disease. Most of the children were weakly; in four there was hereditary predisposition. The duration of the disease was between 11 and 120 days (average 59 days). All recovered. Generous diet, with iron, was the treatment adopted. Cannabis indica and cold and warm douches proved efficient sedatives. Strychnia had no influence upon the disease.

Dr. C. Ritter, of Oberndorf a. d. Oste, in remarks upon the theory and therapeutics of chorea, referring only to cases coming under the head of chorea minor, and occurring shortly before puberty, considers, as the most effectual and trustworthy remedy, the inhalation of chloroform. Mild cases he has seen recover within three weeks under this treatment, severe cases inside of eight weeks. The exceptions, when this failed, were very few. Improvement commences after the first inhalation and continues steadily. Complete narcosis is not necessary, the inhalation to be stopped as soon as the musculus levator palpebræ superior begins to relax. In the beginning, more chloroform is needed than afterwards. With children twelve years of age, Ritter uses at first fifteen grammes, later only ten. Until the improvement is marked, the inhalations should be given daily; later, every other day is enough.

Gray (*Lancet*, ii. 23, Oct., 1871) and Tuckwell *(Ibid.*, 24) report twelve cases of chorea in the Radcliffe Infirmary, Oxford, where complete recovery took place within twenty weeks at the longest, the treatment in each case being purely expectant, without medicine of any kind. The majority of the cases did not last over twelve weeks, the mean duration being a little over ten weeks. With one exception, they were all children, the exception being a woman twenty-six years of age, and in this case the duration was seventeen weeks. The authors are of the opinion that chorea always takes its own course, and for this reason they tried the expectant treatment. A comparison with a series of cases treated with arsenic gave as results that in the latter the mean duration was no shorter.

J. Lewis Smith *(Med. Record.* No. 38, 1872), after alluding to the very important part played by hygienic rules, under the head of medical treatment, speaks of iron as indicated in the great majority of cases by the anæmic condition of the patient. This does not exclude the simultaneous use of other medicines of a more specific nature. Arsenic, recommended by Romberg and others, can be used subcutaneously; thus Romberg, by fourteen injections of from two to seven drops of Fowler's solution each, succeeded in stopping choraic movements of the neck in an adult which were of nine years' duration. Strychnine, introduced by Trousseau, shortens, without doubt, the duration when given in gradually increasing doses, and produces a marked improvement in the patient's general condition. Bromide of potassium is ineffectual, and the author has abandoned its use entirely. Of the many highly-esteemed nervous tonics, as, for example, assafœtida, valerian, musk, zinci sulphat., turpentine, &c., sulphate of zinc has proved itself the best. Smith mentions, also, the treatment employed by Radcliffe in simple chorea, which consists in the administration of cod-liver oil with the hypophosphite of soda. In severe cases, with sleeplessness, a moderate dose of chloral hydrate can be added. Of the different methods of local treatment, as baths, douches, frictions over the spinal column, electricity, &c., the ether spray deserves the most consideration. For each sitting, two ounces of ether suffice for the whole vertebral column as soon as the chorea has become general, to be repeated daily, or every other day.

On the use of Mercury in Diseases of Children.

Wm. Stephenson.—*(All. Med. Cent. Zeitung,* 1872, No. 24)—The author draws the following conclusions from his observations (*Edinburgh Med. Journal,* xvi. p. 980):—

1. Mercury can be employed in diseases of children without danger to the constitution or general health.
2. There is danger only when it is given in such doses that its so-called physiological effects are produced in a marked degree, a proceeding never necessary for remedial purposes.
3. This physiological effect is produced as rapidly and easily with children as with adults, if not easier, and is to be judged not so much by the condition of the gums and saliva as by the depressing effect upon the nervous system and the deterioration of the blood.
4. Only so much mercury should be given as suffices to excite the metamorphosis of tissue; never more, and never for a long period at one time, but always with intermissions.
5. The value of mercury as an antiphlogistic is a very limited and doubtful one, but it furthers the absorption of inflammatory products, and has a marked ameliorating influence upon perverted processes of nutrition.
6. The correctness of this fact is in no way shaken by the unsuitable cases where mercury has been used and the constitution impaired; no more so is it by the not less numerous observations of diseases where recovery has taken place without its use; for the number of cases cured by this medicine where all other remedies had failed is equally great.

Hæmoptysis in Children.

Dr. V. Rasmussen.—*(Hospitalstidende*, xiv., p. 109–113, *Nord. Med. Ark.*, iv. 1. No. 7, p. 21, 1872; *Schmidt's Jahrb.*, 1872, No. vii.)—Hæmoptysis, as is well known, is a very rare occurrence in children under six years of age, either as an initial symptom of phthisis or during the course of that disease. The following observations are, therefore, of great interest. As an example of an idiopathic initial hæmoptysis, Rasmussen relates a case where it came on in a boy, aged eleven years, on entering a hot room, having previously been exercising violently in the cold air. The hæmorrhage was slight and ceased after four days; during the next four months it had not returned. In another case minutely reported by Rasmussen, where a boy died suddenly from hæmorrhage of the lungs, at the autopsy there were found adenitis, suppuration of the glands of the neck and of the hilus of the lungs with perforation of the right bronchus and of the pulmonary artery, catarrhal pneumonia, diffuse interstitial nephritis, and cheesy degeneration of the mesenteric glands. During life, there was dulness on percussion, and auscultation gave bronchial respiration and increased resonance of the voice at the inner portion of the right infra- and supra-spinous region; the cough had a peculiar, cavernous character. General tuberculosis was not found. In a third case, hæmoptysis came on in a boy aged three and a half years, during the course of phthisis, and resulted fatally. At the autopsy, there were found in the lungs, cavities, chronic interstitial pneumonia, peri-bronchitis and miliary tubercles, an aneurism of the pulmonary artery opening into a cavity, miliary tuberculosis of the pleura, spleen, liver and kidneys, cheesy degeneration of the bronchial glands and tubercular ulcers in the ileum. From the detailed description of the anatomical development of chronic pneumonia, partly into cheesy degeneration, partly into interstitial processes, both of which by destruction and breaking down lead to the formation of abscesses, it follows that the disease heals exactly in the same way as in adults. The author explains the circumstance that hæmoptysis so rarely occurs in children by the anatomical peculiarities of phthisis in such cases. Formation of cavities is rare in children, and when they do take place, this is a result of a necrosis of the central portion of a cheesy mass in which the bloodvessels for a long time have been obliterated, and can consequently give no occasion for hæmorrhage. Only with increasing age does a disposition exist for the formation of cavities similar to that in adults, the walls of which are made up of indurated lung tissue containing bloodvessels not obliterated. Amongst these are also to be classed such as have to a certain degree preserved the character of bronchiectatic cavities, found in adults most frequently, on the contrary, in children, very rarely. Consequently, the formation of dilatations of bloodvessels in children must be less common.

WARM SALT WATER BATHS IN FEVERS OF CHILDREN.

CARL SCHWALBE.—[*Virchow's Archiv*, Aug. 19, 1872, 3 and 4 Heft.] The use of cold baths to reduce the temperature in the fevers of children is often accompanied with great difficulties, and is sometimes impossible. Schwalbe tried in a case of catarrhal pneumonia, in a delicate rhachitic child a little over one year old, warm salt water baths (three to five per cent. salt), at 30° to 32° C. The result was so satisfactory that he urgently recommends their frequent employment. The patient, fourteen months old, was attacked May 7, 1871, with an acute pharyngeal and laryngeal catarrh. On the following day there was catarrhal pneumonia, with high temperature (3, P.M., 39·9° C.) and great dyspnœa. Patient was under treatment from May 6th until June 8th, and the bath was employed daily one to three times, After each bath, lasting from five to ten minutes, there followed constantly a reduction of the temperature one to two degrees C. During the bath, it coughed up large quantities of mucus, which was carefully removed from the fauces with the finger. The child recovered perfectly. Being subsequently attacked with the same disease, and, under his treatment from the 8th to the 24th of January, 1872, the baths were again employed three or four times daily—6, A.M., 10, A.M., 4, P.M., and 10, P.M.—and recovery again occurred.*

THE TREATMENT OF MALIGNANT DISEASE OF THE UTERUS.—Alfred Wiltshire, M.D. (*Brit. Med. Jour.* Nov. 2. 1872) reports two cases of this disease which were treated in accordance with the method of Prof. Simon, of Heidelberg, which consists in lightly scraping away the loose and fungating portions of the invaded tissues, thus leaving a healthier and less painful surface, which is, also, less prone to bleed. In neither case does the result seem to be particularly favorable to this mode of treatment.

Dr. Wiltshire favors the use of chromic acid where there is much bleeding or the discharges are copious and offensive. The acid should be used in solution, and great care should be taken lest it attack sound tissues. Half a drachm of the crystals to one ounce of water makes a very strong solution. It may be used as a vaginal injection, in the strength of a drachm to ten or twenty ounces of water, or even weaker. A judicious general treatment of tonics and narcotics should never be omitted in cases of carcinoma uteri.

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* Writers of papers on the Diseases of Children will contribute much assistance in the preparation of these reports if they will forward copies of their papers, addressed to this JOURNAL.—EDS.

Reports of Medical Societies.

BERKSHIRE DISTRICT MEDICAL SOCIETY. J. F. A. ADAMS, M.D., PITTSFIELD, SECRETARY.

February 28th, 1872.—Dr. Mercer, of Pittsfield, reported a case of *Aneurism of the Aortic Arch*, and exhibited the specimen. The patient was a man, aged 46, who had been dropsical for two months. A blowing murmur could be heard over the region of the heart, extending along the carotids and subclavians. At the autopsy, atheromatous disease of the aorta was discovered; and an aneurismal sac, involving the two outer coats, as large as a hen's egg, was found at the right side of the arch, connected with it by a rough, bony orifice, as large as the calibre of the aorta.

Dr. Adams, of Pittsfield, exhibited the *Fœtus of a Deer* lately presented to the Berkshire Athenæum. The doe was shot in the Adirondacks last summer, and was suckling a fawn at the time. On being opened, a fœtus, dry and shrivelled, distorted, and consisting only of bone and a little hardened tissue, was found adherent to the abdominal walls, against the short ribs on the right side, and unconnected with the uterus. It was a case of extra-uterine fœtation, with recovery.

Dr. Adams also reported a case of *Gun-shot Wound of the Abdomen.* The patient was a very strong young man, aged 33. The ball, a No. 1 pistol slug, fired from a Smith & Wesson revolver, entered the body, over the sixth costal cartilage, on the right side, passed downward and backwards, penetrating the seventh costal cartilage, and thence into the abdominal cavity. A little fresh blood was vomited at first; and the following day a quantity of black vomit was raised. Symptoms of peritonitis were rapidly developed, with excruciating pain, but the symptoms were all relieved by the free use of morphia. The patient lived fifteen days, retaining his strength remarkably to the last. Twelve hours before death, he began suddenly to vomit large quantities of blood, followed by black vomit, and rapidly sank. There was extreme tympanites, and the pain was chiefly referred to the umbilicus and right hypochondrium. He took, daily, from one to grains of morphia hypodermically, and half a grain every three hours by the mouth. This was enough to mitigate the pain, but he had very little sleep.

At the autopsy, the bullet was found to have penetrated the liver from above downwards, its track being two and a half inches long; then, passing close to the gall-bladder, to have passed through the duodenum, making two distinct orifices, an inch below the pylorus; then, still passing downward, to have penetrated the ileum at about the middle, finally lodging against the crest of the right ilium, behind the edge of the psoas muscle. The bullet was not bruised at all; it was surrounded by a great mass of lymph, and the peritoneum contained a quantity of blood.

Dr. Adams reported *A Case of Hallucination* in an old gentleman, aged 84, who had, for forty years, firmly believed that his stomach was inhabited by a lizard. His symptoms were those of *valvular disease of the heart* and chronic gastritis. His death was sudden, although he had been very feeble for a long time. At the autopsy, the heart was found hypertrophied, with ossification and contraction of the semilunar, mitral and tricuspid valves; and the aorta and larger arteries were also ossified. The stomach was contracted, its walls much thickened, its lining membrane red, thick and vascular. The lizard was not discovered.

MAY 29th, 1872.—Dr. Lawrence, of North Adams, reported several cases of *Cerebro-spinal Meningitis,* recently under his care. He has had about a dozen in all, of which one was fatal. In all cases there was headache, with pain in the back and limbs, and in several there was screaming. His treatment had chiefly been bromide of potassium and opium. In the first few cases he did not use opium, but found it latterly to be the only means of producing quiet. Chloral did not have a quieting effect. Counter-irritation was effected by blisters and croton oil.

Dr. Babbit, of North Adams, said he had also had several cases of cerebro-spinal meningitis lately. In some of them screaming was a prominent symptom. In the case of one young lady, a choraic action of the head remained after recovery. The cases among infants, attended with convulsions, have generally proved fatal.

Colloid Disease of Stomach.—Dr. Babbitt also reported the case of Prof. Hopkins, of Williams College. He had long suffered from dyspepsia, loss of appetite and diarrhœa, and had a tumor, which could be distinctly felt, in the region of the stomach. At the autopsy, a tumor was found, involving the lesser curvature of the stomach, eight inches in length, extending from the pylorus upward, averaging three fourths of an inch in thickness, and involving the whole thickness of the wall of the stomach. It was not examined microscopically, but was supposed to be colloid in structure.

JULY 31st, 1872.—*Fracture of Skull.*—Dr. Paddock, of Pittsfield, reported the case of a man, 25 years of age, who had been killed by a blow upon the head from a base-ball. After receiving the blow, he walked about town for half an hour or more, then went to his boarding-house, and up stairs to bed. His companions observed that he made incoherent answers to their questions, and complained of pain in the head. During the night, he was heard to moan. When called in the morning, he was found to be dying, and died before a physician arrived. An autopsy was made, and a fracture of the skull discovered, beginning at the junction of the coronal with the sagittal suture, and extending down the right side, opening the coronal suture for about an inch, and then passing through the parietal and temporal bones nearly to the ear. Beneath the fracture was found a clot of blood, weighing four ounces. The man was intoxicated when he received the blow, which was a very heavy one, the bat being held in both hands, and laid on with vigor.

OCT 30th, 1872.—*Epidemic of Diphtheria.*—Dr. Wilcox, of Lee, described an epidemic of diphtheria now prevailing in Lee. He had seen thirty-two cases, of which six had died. It was chiefly confined to children, and the youngest patients have the disease the most severely. The epidemic followed immediately upon one of scarlatina, and had been most prevalent in damp places, especially in old houses. Lee is a damp town, and the paper-mill operatives are over-crowded and not over-cleanly. In all cases, there was great depression. The membrane usually forms first upon the tonsils. In the fatal cases, death generally occurred in about eight days, and results from an extension of the deposit to the trachea. During the epidemic, Dr.

Wilcox had seen two cases of common membranous croup, unconnected with diphtheria.

Dr. Mercer, of Pittsfield, remarked that he had lately had several fatal cases of membranous croup in young children with great depression.

Intra-cranial Abscess.—Dr. Davis, of Lenox, reported a case of headache, which he attributed to abscess of the internal ear, pressing upon the third branch of the fifth nerve. The case passed into the hands of a quack, who pronounced it catarrh of the ear. The patient soon died; and, at the autopsy, an intra-cranial abscess was found pressing the brain to one side.

Cerebral Congestion—Paraplegia.—Dr. Wilcox, of Lee, exhibited to the Society a young man suffering from paralysis of the left arm, accompanied with swelling, anæsthesia and formication. The paralysis extended over the shoulder anteriorly. There was a tender spot over the middle cervical vertebra. The arm was as warm as its fellow. Similar symptoms attacked the left foot and leg, a few days later, but soon passed off. The history of the case is as follows: The patient was first seen by Dr. Wilcox on Sept. 22d. Until noon of that day, he had appeared perfectly well, although on the preceding day he was seen, while running in the woods, to strike his head against a tree with violence. Dr. Wilcox found him wildly delirious, and strapped to the bed by feet and wrists. Quiet was produced by a hypodermic injection of morphia. The delirium returned during the night, but there were lucid intervals when the patient appeared well. The pulse was normal; skin cool and moist; tongue coated. On the second day, the morphia was repeated. On the third day, Dr. Paddock was called in consultation, and advised cathartic medicine, which was given, followed by great relief; but the attacks of delirium continued less frequently for a week. The patient retained his strength, and, unless confined and watched, would escape from the house and wander about for hours. During the lucid intervals, he was depressed. At the end of the week, he was lost sight of; but reäppeared the preceding day, having been cared for at a friend's house in the meantime. He was not aware of having had any crazy spells of late; but the paralysis had been coming on gradually for a fortnight. Dr. Wilcox considered the case in the first instance as congestion of the brain, caused by the blow upon the head.

Bibliographical Notices.

A New Method for Extraction of Cataract. By R. Liebreich, Ophthalmic Surgeon and Lecturer at St. Thomas's Hospital.

A neat pamphlet with the above title has been published by Messrs. Claxton, Remsen and Haffelfinger, of Philadelphia. There can be no question that this plan has immense advantages both over the former methods of flap extraction and the unscientific "new method" by peripheral incision proposed by Graefe, and largely adopted on his authority, but now admitted to have been a wide deviation from the true principles of cataract operation. We quote the words of the author, as a brief description of his method. "To avoid the disadvantages in Graefe's operation arising out of the peripheral position of the wound, and the disadvantages in flap extraction arising out of the height of the flap, I propose a new method of extraction, which is to be made in the following manner:—

"Puncture and counter-puncture are to be made in the sclerotic about one mm. beyond the cornea; the whole remaining incision is to pass, with a very slight curve, through the cornea, so that the centre of it is about two mm. distant from its margin. This incision may be made upwards or downwards, with or without iridectomy, and the lens may be removed through it with or without its capsule. It is, undoubtedly, of all methods the simplest and least painful, the easiest to perform, and requires the least practice."

Prof. Stromeyer, of Havana, referring to his recollections of London operators of forty-five years ago, says, "I often thought of Tyrrell's beautiful operations and their results when the time came that iridectomy seemed necessary for the majority of cataracts before extracting them. I have hailed Dr. Liebreich's innovation as a candid acknowledgment that modern oculists have gone too far in this respect."

The same method of making the incision has been pursued for several years past by Messrs. Le Brun and Warlomont, of Brussels, under the designation of *small median flap*, and has the sanction of their authority. Our own experience has already amply confirmed that of the author, as to the advantages and safety of this mode of extraction, and we commend the pamphlet to the attention of every physician interested in eye operations. H. W. W.

The Diseases of Women, with special regard to their Treatment in Creuznach. By Louis Michels, M.D. Second Edition. Berlin: Mitscher and Röstell; and London: Trübner & Co. 1872. Pp. 75.

The reader of this little volume will not find it an exhaustive treatise on women's diseases, and it is rather deceptive to give to seventy-five pages, in large and open print, a title of such importance. If Dr. Michels had called his paper "The Springs of Creuznach with special reference to their adaptation to the Diseases of Women," he would have given a more honest intimation of the nature of his work. Indeed, in the preface, the author disclaims any intention to give "an elaborate treatise on the diseases of women," and on another page he narrows the subject thus: "Those cases are appropriate for Creuznach in which diseases of the sexual organs give rise to catarrh, and which, as we shall subsequently see, are removed or ameliorated at Creuznach." In other words, Dr. Michels here exalts, in a partisan way, the iodine and bromine characters of his favorite spring, and gives many illustrative cases of "amelioration."

The imprint is German, and it is a treat to read a book so clearly printed. But what is gained in clear typography is sometimes at the expense of correct orthography.

Immediate Remedy for Hæmoptysis.—A saturated solution of gallic acid, inhaled by means of an atomizer, is recommended by Dr. Holden, in the *New York Medical Record*, as capable of arresting pulmonary hæmorrhage with great promptness, even while the flow of blood is profuse. In urgent cases, he mixes the acid with cold water and uses it without waiting for solution to be perfected.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, FEBRUARY 6, 1873.

IT is our impression that the American Medical Association, some two or three years ago, passed a resolution that, for a medical examination for Life Insurance Companies, a fee of five dollars ought to be charged. Whatever value one may place on the opinion of this Association on many subjects, it must be confessed that, on this particular point, it was right. Every medical examiner thoroughly believes that five dollars is a small sum for an examination, when the time occupied and the responsibility involved are taken into consideration; for the hour devoted to the service of the company is one of the most valuable in the day, and the case often involves many thousands of dollars. But, with one or two exceptions, the examiners in Boston get but three dollars, and when they venture to suggest to their employers that this sum is too little, they are met with the reply that if they are not ready to accept that sum, there are those who are quite willing so to do; and we are sorry to confess that, hitherto, this answer has been sufficient to quiet all demands. They thus virtually confess that they believe that their professional brethren are ready to underbid. Is there such a disposition among the physicians in Boston? If so, how can it be justified? When a physician charges somewhat less than usual for a professional service, it is supposed to be because the patient cannot, without distressing himself, pay the regular fee. Is any one of the Life Insurance Companies too poor to pay a proper fee for medical examinations? Is it willing to confess itself to be in this impoverished condition? It is our impression that all these companies announce themselves to be in a prosperous state.

We wonder that the examiners of this city do not, as a body, make a demand for better remuneration. We believe, also, that it is only reasonable to make a charge for time as well as for services. As the matter stands now, the examiner may give the daily hour to the company without a cent of remuneration. In some of the smaller companies he may, indeed, examine a case only every other day, or even on only two of the six days of the week. The time of the remaining days is thus wholly lost to him. If such a collective demand should avail nothing, the Boston Medical Association should take the subject up.

As regards the matter of underbidding, if the present examiners ask for a reasonable compensation for their time and services, and the companies ask for, and obtain, examinations at a cheaper rate, means ought to be taken to let the profession know who the physicians are who hold their services thus cheaply.

The Fourth Annual Report of the State Board of Health was presented to the Legislature January 27th. The following is an abstract of its contents:—

"Smallpox.—In our report of last year this subject, which has since become one of absorbing interest throughout the State, was considered at some length. In view of the epidemic then prevailing in Europe and also to some extent in Massachusetts, we thought it would be necessary not only to enforce the laws relating to vaccination, but to repeal the fifty-first section of the twenty-sixth chapter of the General Statutes in order that cases of smallpox should be isolated. The absolute repeal was not accomplished, but the law was so far modified as to give local boards of health much greater power for the removal of persons affected with this disease than they before possessed. Had the law remained as it was, we cannot doubt that the destruction of life would have been greater than has actually occurred.

"We are now in the midst of an epidemic influence of smallpox poison, more virulent than has been known for many generations. The evidence is abundant to show that both in Europe and America there is, for some reason entirely unknown, a readiness in the human body to receive both the virus of smallpox and the virus of the vaccine disease, such as no one now living has before seen. There are records of such epidemics before the great discovery of Jenner, and they were truly terrible, destroying from one-fifth to one-third of all who were seized; and this comprised the whole population, except those who had been previously attacked, or had been inoculated with smallpox virus. The present epidemic is of such intensity that it is quite common for persons who have had smallpox in former years, now to have it again. Such occurrences have been previously rare. Vaccinations, whether from the cow or from the human body, 'take' readily, and re-vaccinations prove abundantly the extraordinary susceptibility to the vaccine disease now prevailing and *never before existing.* In view of these facts, with which physicians and intelligent persons of whatever calling are now familiar, let us thank God for Jenner's great discovery, without which our homes would be desolated and our peace and happiness destroyed. The imagination can hardly picture the horror which would to-day pervade Massachusetts were the present epidemic unchecked by vaccination. We regard the law of the State authorizing town boards of health to remove persons affected with smallpox from their homes only *on certain conditions,* as unfortunate in its operation, and think that it would have been better to repeal the 51st section, 26th chapter, General Statutes, without reservation, leaving it at the option of the local authorities to enforce the removal to a hospital, or provide for the sick in their homes, as might seem safest and best in each individual case.

"The special report on smallpox, published in the third annual report, recommended that the law concerning vaccination be so modified as to require the primary vaccination of children within six months of birth. Three months would be better. Under present circumstances, a new-born child should be vaccinated without a week's delay. The advice which has thus far been given by our board with reference to smallpox has been as follows:—On the 10th of April, 1871, a circular was sent to the authorities of every city and town, warning them of the impending danger from smallpox, and urging the imporportance of immediate vaccination before the epidemic should get a footing within their boundaries. Inquiries were then made from our medical correspondents all over the State concerning the protection of the people by vaccination. Their replies, with other information on the general subject, were made the basis of a report on smallpox by our Secretary, presented to the Legislature in January, 1872. The Board at that time recommended the repeal of the 51st section of the 26th chapter, General Statutes.

"We would again urge upon the boards of health of cities and towns:—

"1st. To see that every person within their jurisdiction has the protection of recent vaccination.

"2d. To use all the powers which are permitted under the General Statutes to *isolate* every case of smallpox or varioloid which may occur.

"3d. To provide for the destruction of smallpox virus, under medical advice, in all infected clothing and premises.

"Having done these things, their whole duty as regards smallpox will have been performed."

Miller's River Commission.—Report is made of this investigation by the Board of Health and Harbor Commissioners, and the conclusions are given which were adopted by the Commission.

Sewerage of the Metropolitan District.—The Board recommend a survey by engineers in order that a complete and harmonious system may be finally adopted, and refer to the objections made by the city of Boston to the plan recently proposed at the extra session.

Revision and Codification of Health Laws.—It is stated that the interpretation of the meaning of these laws is often difficult by reason of their complexity, and that it would greatly conduce to the efficiency of the local Boards, and to the maintenance of public health, if they could be reduced to a form which any intelligent citizen could perfectly comprehend.

The Law concerning Slaughter-houses and noxious and offensive Trades.—Numerous complaints have been received by the Board during the past year concerning establishments liable to be closed by the operation of this law. In every case, however, with the exception of one very recently brought to notice, the party complained of, when visited by the secretary, has expressed a willingness to do everything which the Board and the complainants thought necessary. Such concessions have satisfied all parties, and the complaints have been withdrawn.

This disposition is in striking contrast with the experience of the Board in 1871, when "hearings" were necessary in nineteen cases, and many of them were very protracted through the testimony of a great number of witnesses and the elaborate arguments of counsel on both sides. It is very apparent that the readiness of parties, maintaining nuisances of a character which makes them amenable to the State Board of Health, to do all which is needful to protect the health, comfort and convenience of their neighbors, is the direct result of the orders issued by our Board in the summer of 1871.

Boards of Health of Cities and Towns.—The State Board strongly urge upon citizens throughout the State to have the local Boards filled with active, competent men, and think that one member of every such Board should be a physician.

BUTCHERS' SLAUGHTERING AND MELTING ASSOCIATION AT BRIGHTON.—This establishment is nearly finished, and will be in operation before the adjournment of the legislature. It is a work of great magnitude. The Board of Health has approved all plans and supervised the construction. Everything is substantial and satisfactory, and the proprietors are highly commended for their enterprise and public spirit. The Board calls the attention of the legislature to the fact that no provision has yet been made for the inspection of animals and of meat: "That such inspection is absolutely necessary to complete the benefits which the public will receive from the abattoir needs no argument. Whoever buys meat from this slaughter-house must in some way be assured that the animal was in health when killed. The fresh meat will be consumed for the most part within twenty miles of Boston, but the salted meats will be distributed far and wide. We respectfully ask the legislature to provide for the appointment of an inspector of animals and of meat at the abattoir of the Butchers' Slaughtering and Melting Association at Brighton, with an adequate salary, to be paid by the State, and that this inspector be under the control of this Board, since we are by the law made responsible for the safe and proper management of the establishment."

Special investigations have been made during the year of various subjects having a direct influence on the maintenance of public health.

1. *Sewage and Sewerage.—The Pollution of Streams.—The Water Supply of Towns.*—This report is in accordance with an order of the legislature and is a voluminous document. It is presented by Prof. William Ripley Nichols and Dr. George Derby, Secretary of the Board, who are jointly responsible for all statements therein contained. Some of the divisions of this report are under the following headings: Dry earth system; water carriage system; refuse not movable by sewers; meat and vegetable refuse—how disposed of in Massachusetts; sewers now in use in Massachusetts; outlets of sewers; English experience; treatment of sewage by chemical processes; intermittent downward filtration; irrigation; treatment of sewage in Massachusetts; analysis of sewage of Boston and Worcester; effect of sewage on running streams; Blackstone River; Merrimac River; Mill Brook; self-purification of rivers; water supply of towns; lakes and great ponds in Massachusetts; lakes supplying metropolitan district; protection of lakes from pollution; plan for utilizing the sewage of Worcester.

2. *Additional analysis of Evidence as to the use and abuse of intoxicating Liquors. Beer-shops and Prohibitory Laws.* By the Hon. P. Emory Aldrich.

3. *On the Character of Substances used for flavoring articles of Food and Drink.* By Henry K. Oliver, M.D.

4. *Drainage for Health.* By Hon. H. F. French.

5. *Infant Mortality.* By Edward Jarvis, M.D.

6. *The Food of the People of Massachusetts.* By George Derby, M.D., Secretary of the Board.

7. *The Adulteration of Milk.* By Arthur H. Nichols, M.D., assisted by Prof. James F. Babcock.

8. *Analysis of a Correspondence on some of the causes of Consumption.* By Henry I. Bowditch. M.D., Chairman of the Board.

9. *Adulterations and Impurities of Food.* By H. B. Hill, Assistant in Chemistry, Harvard University.

10. *House Accommodations of the Poor in our most populous Cities.* By F. W. Draper, M.D.

11. *Health of Towns.* This annual statement from correspondents of the Board relates chiefly in the present report to the condition of towns of 4000 inhabitants and upwards, as regards sewerage and water supply. Other and various information is, however, included.

The mortality of Boston in 1872 has been unprecedented. The deaths in 1872 exceeded those of 1871 thirty-seven per cent. Exclusive of smallpox the increase has been twenty-five per cent. The Board say: "Such results seem fully to justify all which has been said in previous reports of our Board concerning the culpable neglect of public health by the city authorities of Boston. Public opinion has at last been thoroughly aroused, and has compelled the aldermen to relinquish a large share of the power which they could not wisely exercise, and has placed it in the hands of an independent Board from which we have reason to expect the most salutary reforms. In all their efforts to reduce the mortality of Boston they will have the cordial coöperation of our Board.

It will be seen that *trichina disease* has occurred in Framingham. This is another warning against eating pork which is not *thoroughly cooked.*

The expenditures for the year have been $3878.86 of the $5000 appropriated.

The following is from the *London Times* of January 6th, published, it will be seen, a few days before the Emperor's death:—

"The very name of the disease by which the Emperor is disabled will at once convey to the minds of professional readers an approximately correct idea of what he must have been called upon to endure. It was his experience of the same condition which induced Paley to declare that no other conceivable pleasure was comparable to the cessation of pain; and there are, indeed, few of the ills to which flesh is heir that make a larger demand upon human fortitude. Within the memory of many who are now living there was for such sufferers no means of escape from a lingering and painful death, except by a surgical operation of great severity, and one which was attended, in persons past the middle period of life, by such mortality that there was comparatively small inducement to submit to it. According to statistics founded upon large experience, about one in every four of the patients so operated upon, if above the age of 45 or 50, died from the effects of the operation; and hence it was commonly postponed to the latest possible time, and practised only as a last resource. But towards the close of the first quarter of the present century, attention began to be given to a milder form of operation, by which the intrusive substance could be broken into fragments within the body of the patient, and then expelled by the efforts of nature. The process, not actually originated, but practically introduced into Europe by Civiale, was first employed in this country by Baron Heurteloup, who spent some time in exhibiting and teaching it in English hospitals. Slowly and by degrees it has been brought to its present state of perfection, mainly by the labors of Brodie, Fergusson and Thompson among surgeons, and by those of Messrs. Weiss in the invention and construction of the instruments by which the mechanical difficulties of the process are overcome. The Emperor Napoleon is the second royal patient for whom the skill of Sir Henry Thompson has been put in requisition; for he operated successfully upon the late King of the Belgians, and thus enabled him to close peacefully his long career. In this, as in every other surgical proceeding, the experience of the first years after its introduction has been made available for the study of the conditions which tend to failure, and of the means of obviating them; and the last published statistics of the crushing operation show 93 per cent. of recoveries, or even 96 per cent., if, out of a total of nearly 200 cases, we set aside a few deaths arising from causes apparently unconnected with the operation. In otherwise healthy persons, and when the calculus is of small size, crushing may be considered wholly free from danger, and it is only in dealing with larger masses of deposit, and with cases complicated by intercurrent maladies, that a certain though small percentage of mortality is experienced. The Emperor, unfortunately, has reached a period of life at which the strength of maturity is usually beginning to give way to the feebleness consequent upon degeneration of the bodily textures; and the bulletin of Saturday informs us, not only that the calculus was a large one, but that it had probably been some years in course of formation, and that it may, therefore, have set up local mischief among the structures irritated by its presence. It will doubtless be necessary to repeat the crushing more than once, perhaps several times; and each repetition will add to the possible danger of the patient. The account we publish to-day states that the Emperor has passed a less tranquil night; and this announcement, while we trust it may be superseded by the reports of to-morrow, is still quite enough to occasion and justify some degree of apprehension, and the bulletins will be looked for with a certain anxiety. Happily the Emperor has at his command a degree of surgical experience and manipulative skill which no other country in the world could furnish. To persons of less exalted station it is often a comfort to reflect that, after all, and whatever the result, the best possible thing has been done; and this consolation, at least, will be found at Chiselhurst."

A NEW METHOD OF TREATING RETENTION OF URINE AND IMPASSABLE STRICTURE. By FURNEAUX JORDAN, F.R.C.S. *(Brit. Med. Journal, Nov. 9, 1872.)*—The author states that he has been for a long time considering the possibility and propriety, in cases of retention of urine and impassable stricture, of getting behind the stricture and passing instruments forwards—the way the urine runs.

The case is related of a patient who had a distended bladder and dribbling of urine consequent upon retention. Repeated efforts to pass instruments failed.

Dr. F. then carried the left forefinger and a pointed bistoury into the rectum; the point of the bistoury was then thrust forwards through the anterior median line of the rectum, an inch and a quarter from the anus, into the membranous part of the urethra and then drawn forwards for a short distance through the incision. The finger could then be easily passed to the stricture in front, and backwards into the bladder.

A bougie was passed forwards through the stricture, and emerged from the end of the penis; the ivory open end was then cut off and carried by the finger backwards into the bladder. The catheter, through which the urine flowed freely, was allowed to remain twenty-four hours and was then withdrawn and a larger one passed through the meatus, until soon a No. 12 could be passed without difficulty. After the patient had been allowed for a few days to pass the urine by natural efforts, during which a little entered the rectum, the rectal fistula was closed in eight days by drawing off the urine several times in the twenty-four hours, especially before each act of defecation.

The author claims that by thus opening the urethra in front of the apex of the prostate gland the danger of wounding the peritoneum is avoided—a danger which is present in the ordinary puncture of the bladder by the rectal trocar, for the reason that, in cases of retention resulting from old stricture, the prostate is apt to be crowded back nearer to the peritoneal cul de sac than it is found to be situated in the normal state of things.

For a full report of this interesting lecture, together with the plates illustrative of the operation which is here advocated, we must refer the reader to the journal from which we have made this brief extract.

THE PHENOMENA OF MENSTRUATION.—The views of Pflüger *(Schroeder's Manual of Obstetrics)* with reference to the cause of the phenomena of menstruation, are as follows: A constant irritation is exerted on the extremities of the nerves imbedded in the fibrous stroma of the ovary by the slow but uninterrupted growth of the Graafian follicle. This is not sufficiently intense to produce reflex action at once, but in the intermenstrual period, the total irritation is so great that reflex action takes place in the form of marked arterial congestion. This sudden increase in the amount of blood produces essentially two results: In the first place, that Graafian follicle which is the farthest advanced in development ruptures, in consequence of the increased intra-follicular pressure; while, in the second place, a hæmorrhage takes place from the free surface of the uterine mucous membrane; hence the escape of the ovum from the follicle, and the menstrual flow, are joint effects of one and the same cause, namely, the pressure which the developing follicle exerts on the extremities of the nerves, which are distributed throughout the ovarian stroma.—*Med. Record.*

BORAX AND THE NITRATE OF POTASSA IN THE LOSS OF VOICE FROM "COLDS" IN PUBLIC SPEAKERS AND SINGERS.—Dr. J. W. Corson (*Med. Record,* January 1, 1873) states that by the use of these two remedies he has had the pleasure, within the last few years, of restoring to a number of clergymen and lecturers the lost gift of speech within twenty-four hours. The paper contains a statement of several cases. He sums up the results of his experience in the following conclusions:

"1. That in sudden hoarseness or loss of voice in public speakers or singers, from 'colds,' relief for an hour or so, as by magic, may be often obtained by slowly dissolving and partially swallowing a lump of borax the size of a garden-pea, or about three or four grains, held in the mouth for ten minutes before speaking or singing. This produces a profuse secretion of saliva, or 'watering' of the mouth and throat. It probably restores the voice or *tone* to the dried vocal cords, just as 'wetting' brings back the missing notes to a flute when it is too dry.

"2. Such 'colds' may be frequently 'broken up' at the very commencement, and this restorative action of the borax to the voice may be materially aided by promptly taking, the evening previous to a public effort, dissolved in a glass of sweetened water, a piece of the nitrate of potassa, or 'saltpetre,' a little larger than a garden-pea, or about five grains, on going to bed, and covering with an extra blanket. The patient should keep warm next day. This both moistens the dry throat and further relieves the symptoms of 'cold' and slight blood-poisoning from suppressed perspiration, by re-opening the millions of pores of the skin more or less closed by cold.

"3. These remedies have the three recommendations of being easy to obtain, convenient to carry in travelling, and perfectly harmless.

"4. They are nearly or quite useless in the actual cure of any long-continued chronic disease of the throat, or acute inflammation or 'tonsillitis,' both of which require other appropriate treatment."

Correspondence.

"IN-FLESHED" TOE-NAIL.

MESSRS. EDITORS,—It is gratifying to have one's "procedure" successful in the hands of other practitioners. Little or great, the concept was original; and, after pretty thorough search, no one like it could be found published or unpublished. We can assure Dr. Gunn that the operation founded upon it had been tested and proved to be successful in this vicinity years before the appearance of the German student in his neighborhood. It is, moreover, quite certain that the "operation" described by the student was *not* "the identical procedure given by Dr. Cotting," inasmuch as the principle on which the latter is founded is evidently misapprehended or not fully comprehended, or else Dr. Gunn had been successful where he confessedly failed, namely, "in an *inverted* condition of the edge of the nail"—a class of cases peculiarly amenable to the new plan. This very day we have seen a case of the inverted condition, which was operated on nearly eight years ago, with a success that has been and continues to be all that could be desired. It is only requisite to remove a portion sufficiently large and deep, from the proper location, and cicatricial contraction will inevitably prevent a recurrence of the affection. It is to the *cicatricial contraction* that the whole operation must have reference, to insure success, and it is this which makes it a scientific "procedure." Attention to this principle, and a little care in the operation, will render the "barbarous practice" of extirpation of the nail and matrix, or any portion of them, entirely unnecessary. B. E. C.

[We understand that an operation, similar to that described by Dr. Cotting, has been in use at the Massachusetts General Hospital in imitation of the method employed many years ago, in Paris, by Gerdy, who was in the habit of taking out his jack-knife and whittling off the diseased part.—Eds.]

ZURICH AND FEMALE MEDICAL STUDENTS.

MESSRS. EDITORS,—The eyes of Europe, and perhaps America, are often directed now-a-days to an experiment which is being quietly tried in the small University of Zurich. A short stay there last summer, and the perusal of several pamphlets upon the subject, written by professors of that city, has supplied me with some *facts* relating to the study of medicine by women, which, as far as they go, are worth all the heated discussions and absurd tirades with which we are so freqently assailed; at least I think so.

I have no desire to involve either myself or the JOURNAL in a wordy warfare upon this delicate matter, and will therefore write a simple, ungarnished tale, and give to others the privilege of using and abusing my material to their heart's content. Facts, and not fancies, ultimately prevail in this world, and to facts must we appeal to decide all the vital questions that the progress of civilization and education evolve from chaos.

Previous to the year 1864, the portals of the Zurich University had, with two exceptions, been opened only to male students. Two ladies of Zurich had received, by special act of government, the privilege of attending the lectures of the philosophical faculty; they were admitted, however, only as listeners (auditoren), and were not matriculated.

In the autumn of 1864, Miss K., of Russia, made application at the rectorate for permission to attend the lectures, not only upon scientific subjects, but also those upon anatomy and microscopy; this was granted on condition that the instructors raised no objections. It transpired, after a while, that this young lady intended to pursue the whole regular course of medical studies.

About Easter, another Russian, Miss S., who had already made some progress in the study of medicine, arrived and attended the lectures on the same footing as her fellow-countrywoman. As the presence of two ladies pursuing the regular course of studies somewhat altered the aspect of affairs, the question whether they should be matriculated or altogether excluded was brought before the academic senate. After a long session, in which the matter was fully discussed in all its bearings, it was voted to lay the subject on the table for the time being, with the sole requirement that any woman who wished to attend more than two courses of lectures must obtain special permission.

The first Russian, who proved less capable than the second, vanished in 1867, but the latter prosecuted her studies with such energy and persistence that she soon won the respect of both professors and students. She fulfilled all the requirements of the regular course without having gone through the form of taking her matriculation. In February, 1867, she demanded to be admitted to the examination for degree, but was directed first to obtain her matriculation papers. The Rector, after consultation with the Swiss Minister of Education, interpreted the law—in which the matriculation of female students was neither allowed nor forbidden—in favor of the applicant in question. As the young lady had now been matriculated, admission to the examination for degree could not be refused her, so that after her acquirements had been subjected to a rigorous test in every branch of medicine, she received the medical diploma.

This success was not, as had been anticipated, the signal for an afflux of female students. In the following two years only three English women, one Russian and one American studied medicine in Zurich and came up for degree, while one Englishwoman and three Russians were matriculated, but left soon after. In the summer term of 1868, the first female student, an Englishwoman, was matriculated by the philosophical faculty, but left at the end of the term. In the winter term of 1869–70, six Russians appeared, of whom three departed without examination. In the summer term of 1870 three Russians arrived, who also left without degrees. In the winter term of 1870–71, the number of those newly matriculated rose to eleven, of whom five left without degree. In the summer term of 1871, a single female student was matriculated, whereas two left without, and one with the diploma.

Thus far the study of medicine by women had developed but slowly in Zurich. Of the twenty-five female students who had attended the medical lectures for irregular periods since 1864, three left with, and seven without, their degrees; of the seven matriculated in the philosophical department, three had departed without the diploma. In the summer term of 1870, but fifteen women studying medicine, and four philosophy, remained.

In the next term, 1871–72, the number rose from nineteen to thirty-one, and in the summer term, 1872, from thirty-one to sixty-three. With the increase in quantity a decrease in quality was perceptible; this was due chiefly to the fact that quite a number of them had not the requisite age, training and devotion to their studies. Among the sixty-three there were fifty-four Russians, in whose country, though no university is open to women, yet so-called public lectures for women are delivered in two years courses. The first Russians stated that in the interior of that great country there were long stretches where no physician could be found, and where they intended to practise; this induced many lecturers to favor their admission to the courses on the score of humanity. It was also hoped that the doors of all German universities would be thrown open to them; this has not taken place, and the Zurich university is left to vie alone with the crowd of female students.

That the prosperity of that institution has not been impaired is evident from the number of students now frequenting it; this has increased from 232 in 1864 to 354 in 1872. The gain is especially marked in the medical department, which was attended by 107 male and 1 female student in 1864, whereas in the summer of 1872 there were 208 students, of whom 51 were women. The greater throng of these last has now stimulated the faculty to appeal again to the government for a special examination for women.

In this connection, one fact is deserving of mention. In July, 1871, the principal medical bodies in most of the Swiss cantons explicitly voted by a large majority in favor of the admission of female candidates to the so-called medical "concordats" examination; the action was induced by the announcement that the first Swiss girl, who had been studying in Zurich, had applied for the State examination. As a consequence of this, the young lady referred to has honorably passed the first State examination. Switzerland, which has notably favored in every possible manner the education of women and their appointment to service in the post and telegraph offices, has thus taken a most decided stand for the extension of the sphere of women's privileges.

It is admitted by all the professors that the experiment of women's study of medicine in Zurich was perfectly successful in the first four or five years, when only six or eight women were there enrolled. No irrelevant conduct on the part of the students was noticed; in fact, the modest and sensible demeanor of the young women exerted rather a favorable influence upon the behavior, habits and earnestness of the men.

The first female students in Zurich were so convinced of the importance of a more strict discrimination in the admission of women to the courses, that they took the initiative in demanding that certificates or tests of proficiency should be required, to which a part of them begged to be also subjected. They foresaw that the whole experiment would fail if too young or immature girls should attend the lectures without sufficient preliminary training or devotion to the work. Of this they often spoke themselves.

Six women have already passed with honor the examination for the medical degree. Four received "good" as a comment, and two "very good." Several of the professors have, at their graduation, taken the opportunity of expressing, in public, their perfect satisfaction at the progress made by the female students.

The woman who took the first degree now enjoys a large practice in St. Petersburg. The third female graduate, who is now the wife of a St. Petersburg physician, joined, in January, 1871, the Zurich ambulance train, which was sent to the battle-field near Belfort; the director, Prof. Rose, states that in the hospital near Hericourt "she soon won all hearts by her modest, self-sacrificing activity."

The second female doctor of the Zurich University—an English woman—has just received the position of assistant physician to the Woman's Hospital recently founded by Mrs. Garret-Anderson in London. The fifth female graduate has been recently appointed visiting physician of a Woman's Hospital about to established in Birmingham.

"The fourth woman, who received her medical degree in Zurich on Oct. 26, 1871—an American, from Boston—went to Vienna for the purpose of pursuing her studies still longer, but intends to return ultimately to Boston; even before the commencement of her studies, she had been assured of receiving the post of physician to the Children's Hospital in that city, if she returned with her degree from Zurich within a certain period. Dr. Hermann Meyer, Professor of Anatomy, expressed to this young lady in public, at the time of her graduation, the respect of his colleagues 'because of her energy and determined, high-minded perseverance,' and added, that 'by her example she had shown that it was possible for women to devote themselves to the practice of medicine without discarding the true characteristics of woman.'"*

The sixth woman, who has recently passed the medical examination with great distinction, has been appointed, by Prof. Dr. Biermer, director of the medical clinic, second assistant in the women's department of the Zurich Hospital. It is universally acknowledged that she fills her post most efficiently.

The chief objection made to the attendance of both sexes is on the score of the moral dangers. The professors of the Zurich University have expressed their opinion officially upon this most delicate point, in reply to the following questions addressed to them by the Medical Faculty of Würzburg, in 1870: "Whether and what improprieties have attended the admission of individuals of the female sex to the courses, and especially from their association with male students during certain lectures and demonstrations, from which womanly modesty might be expected to shrink?" The following was the response:—"With respect to this question, the faculty of the University of Zurich finds that the presence of female students in the theoretical and practical courses gives rise to no troubles of any kind. The lectures and demonstrations are conducted without any reference to the ladies present, and even in the anatomical exercises and clinical exhibitions the material is as thoroughly used as when only male auditors were present. In spite of this no unpleasant event has occurred. As a six years' experience has already been acquired, the faculty now looks forward with satisfaction to a further solution of the problem being tested. The faculty is also of opinion that the earnest desire to work and the discreet behavior of the young ladies studying medicine here, as well as the polite deportment and peaceful disposition of the Swiss students, have contributed largely to the results thus far obtained."

That the question of women's study of medicine is answered by the experience of Zurich is not claimed even by its warmest advocates in that city, yet all unprejudiced observers must admit that the testimony of those who have watched the working of the experiment there is worthy of great weight. This I have attempted to give a fair statement of in the above pages, without committing myself either for or against the principles involved. This is not the first time that women have studied and practised medicine in Germany,† for on June 12, 1754, Frau Dorothea Christiania Erxleben received the medical degree after proper examination. She practised in the small city of Quedlinburg, and was wife of the deacon of the St. Nicholas church. In the history of her life she wrote "that marriage was no obstacle to a woman's studies, but that their pursuit was far pleasanter in the companionship of an intelligent husband."

I am very truly yours,

Berlin, Dec. 1st, 1872. JAMES R. CHADWICK, M.D.

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* Das Studieren der Frauen, by Prof. Dr. Victor Böhmert, of Zurich. To the same pamphlet I am indebted for many of the details contained in this letter.

† The University of Zurich is popularly regarded as one of the German Universities, not only from the use of the German language, but because, in the words of its founder, "It was established to be a citadel of German science in Switzerland."

Medical Miscellany.

THE commencement exercises of the Dental School of Harvard University will be held on Wednesday next, at the Medical College in North Grove Street, at 12 o'clock. An address will be delivered by Charles S. Tomes, M.A. Oxon., M.R.C.S., L.D.S., of London, England.

DR. HILGENDORF, Senior Professor of the Polytechnic Institute in Dresden, has accepted the chair of Natural Science in the School of Medicine at Jeddo, Japan. Dr. Cochins, formerly of the Victoria College in Berlin, has also been appointed Professor of Physics and Chemistry in the same institution.

THE custodian of the Imperial Library in Berlin offers a reward of five hundred dollars for the recovery of seven exceedingly valuable manuscripts that have been recently stolen from that establishment.

FEMALE MEDICAL EDUCATION IN THE EDINBURGH ROYAL INFIRMARY.—At the meeting of the managers of the Royal Infirmary, held on Monday, the following resolution was passed: "That the managers of the Royal Infirmary resolve to admit females already enrolled in the student's register for Scotland to receive clinical instruction, at a separate hour from that at which male students are admitted into the hospital, and in a stated number of wards, containing eighty beds, to which the female students must confine their visits; and remit to a sub-committee to make the requisite arrangements and alterations."—*British Med. Journal.*

THE City Physician of Providence reports that there were four deaths from smallpox in that city during the month of December, a very unusual number for that city. A case of smallpox was received from Boston about the first of October, and since that time the whole number of cases in the city has been 25. This includes both the unmodified cases and the modified. Some of them were very slight. Of the whole number, 25 cases, 18 are positively known to have originated in Boston directly, or indirectly. At the present time there are only five cases known in the city, of which three are very slight cases of the modified disease. They are all at the hospital at Field's Point.

In concluding his report, he states that all our cities showed a large increase of mortality in 1872, as compared with the previous year. The increase in Providence was 27·6 per cent.; in Boston 34·4 per cent.; in Philadelphia 28 per cent.; in Brooklyn 23·2 cent.; in New York 21 per cent.

THE STUDENTS' JOURNAL AND HOSPITAL GAZETTE.—The year 1872 was fruitful in medical students' journals, and 1873 has begun with another. The students at Guy's Hospital commenced last year a creditable periodical; and their brethren at Aberdeen a fortnightly journal, admirably conducted and of some pretension. With the view of supplying the students at the various metropolitan schools with a periodical "that will be of assistance to those students who are preparing for medical and surgical examinations," and which will give the hospital doings and news, including also original stories of a professional character, which we presume will be culled from the smart sayings of hospital surgeons, the periodical now before us, *The Students' Journal and Hospital Gazette*, has been brought into the world. It contains "Our Introductory," extracts from the ordinary works on anatomy and physiology, an abstract of a lecture by Mr. Hancock, and paragraphs of news from hospital correspondents. "Literature and the Drama" are not forgotten, and "Science and Art" have their share of space. The journal is to appear fortnightly.—*British Medical Journal.*

A New Medical Journal is announced—*The Medical Record*—to be published weekly in London, and "to supply medical readers with a condensed, readable and reliable analysis of the immense mass of information relating to the medical sciences now scattered over the surface of British and Foreign periodical medical literature."

NOTES AND QUERIES.

Messrs. Editors,—The secular papers say that Isaac Fletcher, æt. 12, East Boston, under the care of Dr. Bushnell, died, a short time since, from the effects of vaccination with *humanized* vaccine virus. Is this so? You have told us of two cases (Page 78) fatal from non-humanized virus. Let us know all the truth. It is able to stand upon its own legs. B.

The following is going the round of the newspapers:

"There is a report that a case of burying alive has recently happened in Berkshire County, the victim coming to and making her case known by groaning as she was being deposited in a cemetery vault."

If true, will not some competent Berkshire physician let us have the particulars—the whole truth. Doubter.

Books Received.—Diseases of the Ovaries. Their Diagnosis and Treatment. By T. Spencer Wells. New York: Wm. Wood & Co. Pp. 478. (From the Publishers.) For sale by A. Williams & Co.—The Ocean World. From the French of Louis Figuier. New Edition, revised by E. Prescott Wright, M.D. With 435 Illustrations. New York: Harper & Brothers. Pp. 656.—Handbook of Physiology. By William Tenhouse Kirkes, M.D. Edited by W. Morrant Baker, F.R.C.S. With 248 Illustrations. Eighth Edition. Philadelphia: Lindsay & Blakiston. 1872. Pp. 825. For sale by A. Williams & Co.—A Handbook of Therapeutics. By Sydney Ringer, M.D. Third Edition. New York: William Wood & Co. 1872. Pp. 560. For sale by A. Williams & Co.—Illustrations of the Influence of the Mind upon the Body in Health and Disease, designed to elucidate the Action of the Imagination. By Daniel Hack Tuke, M.R.C.P. Philadelphia: Henry C. Lea. 1873. For sale by A. Williams & Co.—Aids to the Diagnosis of Diseases of the Kidneys. By W. R. Basham, M.D. Philadelphia: Lindsay & Blakiston. 1872. Pp. 46. For sale by A. Williams & Co.—The Practice of Surgery. By Thomas Bryant, F.R.C.S. 507 Illustrations. Philadelphia: Henry C. Lea. 1873. Pp. 284. For sale by A. Williams & Co.

Pamphlets Received.—The True Object of Medical Legislation. By Stephen Rogers, M.D. Albany. 1873. Pp. 15.

Died,—In this city, 2d inst., Dr. Barker B. Kent, aged 28 years 5 months.—At Rainsford Island, Boston Harbor, Jan. 28th, Dr. Robert Greer, aged 67.—At Newburyport, Feb. 1st, suddenly, Henry C. Perkins, M.D., aged 68.

Mortality in Massachusetts.—*Deaths in thirteen Cities and Towns for the week ending January* 25, 1873.

Boston, 153—Charlestown, 19—Worcester, 18—Milford, 3—Chelsea, 10—Cambridge, 28—Salem, 10—Lawrence, 15—Springfield, 2—Lynn, 8—Fitchburg, 3—Newburyport, 3—Somerville, 4. Total, 276.

Prevalent Diseases.—Smallpox, 48—consumption, 38—pneumonia, 27—scarlet fever, 20—croup and diphtheria, 12—typhoid fever, 10.

The deaths from smallpox were as follows:—In Boston thirty-five, Charlestown five, Cambridge five, Chelsea one, Salem one and Lawrence one. The deaths from scarlet fever were as follows:—In Boston eleven, Cambridge three, Chelsea two, Salem two and Lawrence two.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, February 1st, 166. Males, 107; females, 59. Accident, 2—apoplexy, 1—inflammation of the bowels, 1—disease of the bowels, 1—bronchitis, 2—inflammation of the brain, 2—congestion of the brain, 1—disease of the brain, 1—cancer, 5—cholera morbus, 1—cerebro-spinal meningitis, 2—consumption, 24—convulsions, 4—croup, 2—debility, 1—diarrhœa, 1—dropsy, 1—dropsy of the brain, 2—disease of the hip, 1—infantile, 1—diphtheria, 1—erysipelas, 1—scarlet fever, 7—typhoid fever, 4—disease of heart, 6—homicide, 1—disease of the kidneys, 4—congestion of the lungs, 1—inflammation of the lungs, 14—marasmus, 8—old age, 6—paralysis, 4—premature birth, 1—puerperal disease, 3—rheumatism, 2—smallpox, 42—tumor, 2—whooping cough, 2—unknown, 1.

Under 5 years of age, 48—between 5 and 20 years, 19—between 20 and 40 years, 48—between 40 and 60 years, 23—over 60 years, 28. Born in the United States, 103—Ireland, 37—other places, 26.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

CAUSES AND TREATMENT OF STRABISMUS.

[Read before the Semi-annual Meeting of the Bristol County Medical Society.]

By J. J. B. Vermyne, M.D., New Bedford, Mass.

Mr. President and Gentlemen,—The subject which I have chosen for my essay is, strabismus, its causes and treatment. The subject has always been especially interesting to myself, and as operation for strabismus was formerly, and still is occasionally, performed by general practitioners, I thought it might prove of interest to you also, and I have endeavored to condense some of the most noteworthy points from an extensive literature into a brief space.

When looking at any object with both eyes, we see this object single, if the images formed on the retina of each eye cover corresponding or identical parts. If this is not the case, we see the object double. Every one of us, who has been in the habit of seeing with both eyes, can cause immediately the appearance of double images by applying, for instance, the forefinger to the under eyelid, and making a very gentle pressure between the margin of the orbit and the eyeball. The latter is thereby displaced a trifle upward. If we look now, for instance, at the light of a candle, we immediately see two images—one belonging to the right eye, the other to the left. If one of the muscles of the eye is paralyzed, the eye deviates in the direction of the antagonistic muscle, and we constantly find the symptoms of double sight, especially when the object lies at the side of the affected eye. If the left rectus externus is paralyzed, the patient sees all objects at the left side double. The diplopia, however, does not appear at once. The first symptom is indistinct vision, because the images of outside objects cover each other partly, while at the same time a feeling of dizziness and unsteady walk is observed. Gradually its character of diplopia becomes more and more distinct, and it covers a wider range. At first it only appears at the affected side, but after some time it also appears when looking straight forward, and, especially after long duration, even when the object lies at the opposite side.

In strabismus we have something different. There is also deviation of one eye to the inside or outside (rarely upward or downward) of the object, which is seen by the other eye. But, in general, the patient does *not* see double, although the impression of the object is made on the retina of both eyes. The deviation is here produced by excessive contraction and consequent shortening of one of the muscles, and, in almost every case, it is accompanied by loss of the power of sight. Especially in the beginning, the deviating eye is not blind, but it pays no attention to the object observed by the other eye; for reasons which will be made more distinct presently, it suppresses the image of the object formed on its retina. This is, as Donders observes, one of the examples how readily we may abstract ourselves mentally from any idea, or from any impression, if we want to do so. The watchmaker and engraver, when employing a simple magnifying glass, use only one eye, yet they do not close the other. When we work with the microscope or ophthalmoscope, we do the same. And we all know how, in the sound, we find something identical in the application of the stethoscope, where the experienced ear hears only the sounds proceeding from lungs, heart or arteries, and completely suppresses any other sound that might arise.

Another difference between strabismus and paralysis is, that the affected eye follows the movements of the other eye. At the commencement of the disease it can even be brought to look straight at the object, and it will observe this after the other eye has been covered. This is completely, or almost completely, impossible in paralysis of one of the muscles.

We mentioned that with the deviation there also occurs loss of power of sight. This depression of sight is developed gradually. If squinting has existed only a short time, we may cover the well-directed eye with the hand, and we see that the deviating eye is fixed upon the object; and often, when the hand is removed, it remains in that direction, both eyes looking straight at the object, but the least motion, as, for instance, winking of the eyelids, is enough to re-produce the deformity. If, now, we compare both eyes in respect to this power of sight, we find a marked difference; but the loss of sight is not yet so much that it may not be wholly or partly restored to its full power after the cause has been removed. But if not, it goes on decreasing gradually, till the eye is almost blind, at least for direct observation, and with this loss of power, decreases at the same time the possibility of directing both eyes to one point. This is always the case in strabismus simplex.

To see any object distinctly, the patient only uses one eye, either always the same, or each eye alternately. In the first case (strabismus simplex), the sight is always impaired from want of exercise of both eyes. Not so in the second case (strabismus alternans), where both eyes are used alternately and retain their original power. The loss of power from this reason finds its analogy in the lesser strength and fitness for work of the left hand in most persons, in the difficulty of moving the conchæ of the ears, although provided with special muscles to this purpose in certain pathological states.

The action of seeing, in strabismus simplex, is very much like that of a one-eyed person, with this exception, however, that in strabismus the deviating eye, though losing gradually its power for direct vision, retains the sight for such objects as are kept from view of the other eye by the bridge of the nose. The field of vision is therefore larger than in a person with one eye, and after strabismus has existed a long time, we find, on examination, a marked difference between the external and internal half of the retina in regard to perception of light.

Resuming, therefore, what we have said above, we find that in both paralysis and strabismus there is deviation of one eye in a certain direction, but that the paralyzed eye cannot move with the other, while the squinting eye always follows. Only there is an inability to bring both visual lines to bear upon the same point together. Besides, in paralysis, there is double sight, which is not the case in strabismus.

From what we have said about the gradual loss of sight of a deviating eye, it will be clear that to let such an eye alone means to sacrifice its power of vision, and that it will be necessary to treat these cases as early as possible. In most cases, strabismus appears about the fifth or the sixth year, rarely before or after. This prevalent age for the formation of strabismus is already in itself an indication to the prevalent cause of the disease, of which I now wish to speak.

Among the diseases of the eye which have been better understood since the invention of the ophthalmoscope shed new light over this organ in its state of health and disease, and led to further investigations in the laws of refraction and accommodation, belongs certainly strabismus.

The former ideas of the causes of strabismus have undergone a great change and have been altogether discarded, or at least have been assigned a very subordinate position. When we compare the older handbooks with the works of more modern authorities, we find that while, in the first, strabismus is considered as a disease in itself, in the latter it is regarded as a symptom, and while in the former strabismus is mostly attributed to external causes, the latter explain it through the laws of refraction of the eye.

In the year 1861, at the session of the Ophthalmological Congress in Paris, Prof. Donders made public for the first time his researches concerning the pathogenesis of strabismus. And from that time his clear exposition of theories, founded upon and proved by numerous observations, has taken the place of the different explanations found in the older handbooks. To clearly understand this theory, it will be useful to say a few words about the refraction and accommodation of the eye.

In regard to the power of refraction of the transparent parts of the eye, we find three different states, for which, adopting the nomenclature given by Donders, we have the names of the emmetropic, hypermetropic and myopic eye.

In the emmetropic eye the waves of light, emanating from a source situated at an infinite distance, are broken in such a manner that those coming in a parallel or almost parallel direction, are united again in one point of the retina, the different points, however, of which the object is composed forming a reversed image of this object. If this object comes nearer, the waves of light do not longer run in a parallel direction, but they diverge, and the nearer it comes, the more they diverge. If the eye should remain unchanged those divergent waves would not find their focus in the retina, but somewhere behind that membrane. But the eye possesses a beautiful mechanism, by which it can adapt or "accommodate" itself for these diseases. By contraction of the ciliary muscle it presses the elastic lens, thereby curving its anterior and posterior surface more than it is in the state of rest. It provides itself, so to speak, with a stronger lens, and the same effect is produced as when a lens of certain focus had been placed before the eye in its state of rest; that is, divergent waves of light find now their focus also on the retina. This power of accommodation is the strongest in youth, and already at sixteen years it is not so strong as at ten, and gradually it becomes less. Of course, if we look at near objects, we are obliged to converge the visual axes, so as to meet in the object before us. The more we converge, the more we are able to accommodate.

If the eye is hypermetropic, parallel waves of light, in place of being united into one point on the retina, find their focus at some imaginary point behind the retina. The axis of the eye, from the centre of the cornea to the yellow spot, is in reality too short. The impression made upon the retina by any point from an object situated at an infinite distance, is not a point, but a circle, a horizontal section of the cone of waves, formed after the refraction, and more or less large, according to the distance between the retina and the imaginary focus behind it. The projection of any such object upon the retina is not formed of points, but of circles, which partly cover each other and thereby the appearance is blurred. Just the same thing happens when divergent waves of light fall into the eye, when it is in a position to receive parallel waves. But we saw how, in this case, the eye adapts itself to bring these waves to a focus on the retina, and the hypermetropic eye does the same. By changing the surfaces of the lens, by curving it to a higher degree, it brings these waves into one point on the retina. Here now appears a great difference between the emmetropic and the hypermetropic eye. For, as the first only accommodates its eye for divergent rays, for near objects, and completely relaxes its accommodation when looking at an infinite distance, the hypermetropic eye has to use its accommodation to perceive parallel rays, and when the object comes nearer, has to add to this just as much as the emmetropic eye uses for the same distance.

In the myopic eye, the waves of light, in place of finding their focus on or behind the retina, are united in some point before that membrane, when the object lies at infinite distance. Only such waves as come from a nearer source, and consequently running in a divergent direction, can be focussed on the retina. Hence, the nearsighted eye very distinctly observes objects, even very small ones, which are brought very near to the eye. However, it must always be borne in mind, that the object, when brought very near, is also seen under a greater angle of vision. If we compare such an eye with the emmetropic eye, we see that, while the farthest point for distinct sight for emmetropic eyes is situated at an infinite distance, for the myopic eye it lies at definite distance, and, according to the degree of myopia, every object within this distance can be distinctly seen, but beyond that distance the sight is indistinct.

These few remarks I thought it would be fit to make before repeating the statement, made by Prof. Donders, concerning the cause of strabismus, and which contains the following rules:—

1st. Strabismus convergens is mostly caused by hypermetropia.

2d. Strabismus divergens generally is produced by myopia.

To explain how strabismus convergens can proceed from hypermetropia, we must shortly repeat a few of the statements made above. It will be remembered that the hypermetrope must accommodate his eye for infinite distances, and that, when looking at near objects, he must add just as much as the emmetrope uses for the same distance. Also, that accommodation always is accompānied with convergence, and that the greater the convergence the more we can accommodate. We also saw that strabismus mostly begins about the fifth or the sixth year. It is the age when the eyes begin to be used already for closer and more constant occupation, when the power of accommodation is more continually brought into action. Now it is very natural that where accommodation must be used to a great extent, there is an inclination to increased convergence. This exists more or less in each hypermetropic eye. But the effect of this strong convergence is far from pleasant. We can make ourselves hypermetropic, supposing we are emmetropic, by applying very strong concave glasses to the eyes. If now we try to converge, we see immediately that convergence for very short distance is followed by double images of the objects which are observed. Exactly the same thing happens with the hypermetropic eye.

At the commencement, squinting appears only periodically, but if nothing is done to prevent it, the intervals become shorter, and at last squinting becomes permanent. At the same time the patient, troubled in his vision by the more or less complete double images, learns to suppress the image formed upon the retina of one eye, which begins to lose its power, thereby greatly contributing to the permanency of strabismus.

But of course not every hypermetropic eye is attacked by strabismus. The circumstances which give rise to this deformity, when hypermetropia exists, are, in the first place, an innate difference between the power of vision and the refraction of both eyes. Partly on account of astigmatism, partly from some, as yet unknown, anomaly of the retina, there very often exists a marked difference between the refraction and the power of sight of both eyes. In both cases, but especially if both circumstances, less quantity of sight and greater degree of hypermetropia, occur in the same eye, the consequence will be that already for great distances the images are very indistinct, because they never can cover identical points of both retinæ. For shorter distances, where the accommodation has to be increased and strong convergence of the visual axes to be brought into action, the trouble in distinct vision is eminent. Here, and in every analogous case, there is nothing left the patient but indistinct vision with both eyes, or distinct vision with one eye, with gradual loss of power of the other eye, and strabismus. If the person is old enough, he can exercise his sight so far as to form a tolerably correct idea from the indistinct images, and this is by the optic nerve transmitted to the brain, and in this way strabismus can be prevented. But, especially in children, squinting is readily formed. They learn to suppress the image formed on one eye; practically speaking, they put one eye out of the way and see only with the best. Of course, the other eye receives impressions from outside objects, but these do not fall on the macula lutea, and the more remote they are from that spot, the less they will interfere with the distinct sight of the other eye, and the easier it can be suppressed. First for this reason, and secondly for the greater facility of accommodation, one eye is turned in more than the other and periodical squint is changed into permanent strabismus.

Another cause is the existence of opacities of the cornea. Pagenstecher and Saemisch, two German oculists, showed first the frequent relation between the two anomalies. But Donders does not admit this to the same extent, unless, as in the first category, hypermetropia exist. In this case, the whole state is brought back to that of the hypermetropic eye, with less quantity of sight in one eye, which, as we have seen, is one of the great causes for strabismus, when defective refraction exists. Ruete first directed the attention to the circumstance that the inflammatory process by which the maculæ corneæ are produced, can extend under the conjunctiva over one or more of the muscles or their surrounding tissues. He thinks that at first in this way a spasmodic shortening is produced, which gradually becomes real shortening and causes strabismus. It is not improbable, however, that the real relation between the two diseases is defective refraction again, and that the reason why strabismus occurs, is that the inflammation and consequent intolerance to light cause the patient to close one eye, or at least, when he wants to see, to open only one eye. In this case, he can converge very much without being troubled by double images, but the convergence becomes at last permanent. In the same manner, we will often observe that at the commencement of strabismus from hypermetropia, the deviation is much stronger if one eye is covered, and the short distance of the object from the eye necessitates an excessive amount of accommodation.

The forming of strabismus is also made easier by circumstances which give more occasion to strong convergence, and to these belong, especially, a greater power of moving the eye inward. Many persons have an innate insufficiency of the outer or inner straight muscle, to a more or less degree, and whereas the latter excludes the possibility of strabismus convergens, the first facilitates it. We observe this insufficiency of the musculus rectus externus in many persons who are able to converge the eyes to a great degree, thereby simulating strabismus convergens. If hypermetropia exists, this insufficiency can easily increase, and strabismus follow. These are the cases where strabismus is produced by the habit of mimicking.

External causes may cause strabismus, not however to such an extent as was formerly believed. We spoke already about the influence of opacities of the cornea and bad habits, and we have seen that, in fact, they mostly act as indirect causes, the direct cause being, in almost every case, the persistence of defective refraction. Where statistics have been made from a large number of observations, we find this in 80 to 90 per cent. of the cases.

The relation of divergent strabismus to myopia is also very clear. The myopic eye is elongated, acquires an ovoid shape, and thereby its movements, especially inward, are impeded. Yet the objects must always be brought very near to the eye, and strong convergence causes fatigue. Therefore, while one eye turns inwards, the other is allowed to turn outwards, and the forming of double images and their consequent mental suppression follows as in hypermetropia.

It is worthy of observation that strabismus is not so much connected with the very high degrees of hypermetropia, but generally with the medium degrees. This occurrence can easily be explained. For even with the greatest strain on the accommodation and the strongest possible convergence of the visual lines, such eyes cannot receive a distinct view of near objects. Consequently, the person learns to obtain nearly correct impressions from the indistinct images which are formed on his retinæ.

(To be continued.)

UNIFORM TEMPERATURE.—An invalid now at Santa Cruz, West Indies, sends a record of temperature for December, 1872. Observations were made four times in each day. The highest reading of the thermometer at 8, A.M., was 80½°, the lowest 77°; highest at noon 84°, lowest 80°; highest at 2, P.M., 83½°, lowest 80°; highest at 7, P M., 81°, lowest 79°.

Progress in Medicine.

REPORT ON MIDWIFERY AND GYNÆCOLOGY.

By W. L. Richardson, M.D.

Pregnancy.

Action of Sulphate of Quinine on the Uterus.—(*Bulletin de la Soc. de Méd. de Gand,* 1872.) Dr. Bouqué read before the Société de Médecine de Gand, at one of the earlier meetings of the present year, a communication in which he claimed to have proved the great value of sulphate of quinine as a substitute for ergot (*Boston Med. and Surg. Journal,* May 2, 1872). Since that time Dr. Bouqué has been engaged in still further studying the subject, and has recently read a second paper before the same society, in which he brings forward still further proofs of the power of quinine to produce uterine contraction.

In France Dr. Duboué (*Pau*) admits the power which quinine has to act thus upon the uterus, and also claims that he has frequently arrested, by its use, severe nasal, intestinal and uterine hæmorrhage, even in cases where the question of any possible malarial influence could not be considered. From Belgium, Dr. Deneffe reports two cases of uterine hæmorrhage, which were thus treated with the most satisfactory results. Several articles on the subject have recently been published in the Italian journals, the most important of which appeared in the *Gazetta Medica Italiana—Lombardia* (1871).

Dr. Bouqué cites three cases of his own in which he gave quinine for severe uterine hæmorrhage, with the very best results. He also quotes in detail three cases reported by Dr. Omboni (*Gaz. Med. Italiana*), in which the patients were threatened with so-called puerperal fever, as shown by rapid pulse, increased temperature, suppression of lochia and milk, more or less abdominal pain and hurried respiration. In these cases the administration of quinine (3 grains every second hour) seems to have acted like a charm. Dr Bouqué reports also a similar case in his own practice. In a case of uterine hæmorrhage, coming on the eighth day after delivery, the administration of quinine immediately arrested the flowing.

In certain cases, however, Dr. Bouqué has found that quinine, given in sufficiently large doses to act upon the uterus, has also acted upon the bowels, giving rise to a very decided diarrhœa. In these cases the addition of opium has at once checked this unfavorable action of the drug.

Dr. A. Walraven (*Lamswaarde*) has also recently submitted a communication to the same society, in which he states that he has frequently seen an abortion follow the use of sulphate of quinine, especially in those cases in which the patient has taken the drug in large doses; and he adds that he has always observed that this accident is most common in plethoric women. According to this writer, quinine is more apt to produce an abortion when given in the earlier or later months of pregnancy than when taken between the fourth and seventh months. In confirmation of his views he gives the details of four cases in which abortion followed the administration of sulphate of quinine. He also quotes three cases reported by Dr. Landman (*Helvoort*) in which the same results were noticed.

On the other side of this question, we must briefly allude to a communication read before the same society, by Dr. Cauterman, in which the writer reports two cases which, though not proving the new property attributed to sulphate of quinine, yet tended to provoke inquiry as to whether the results observed might not be due to the drug which had been given. The writer then goes on to allude to the very large class of cases in which, for one reason or another, sulphate of quinine was administered, without however producing any action on the uterus. On the whole, Dr. Cauterman would prefer still to rely on ergot in all cases where speedy action is called for, although he strongly advocates the further investigation of the physiological action of this drug.

The Society, under whose auspices these investigations are being carried on, have invited communications on this subject from all members of the profession who have had any experience in the use of this preparation of quinine, and it is to be hoped that some interest in the question under discussion will be shown by the medical profession in America.

Position of the Gravid Uterus.—Dr. Guyon contends (*Arch. de Phys.* iii., i. p. 75) that the cause of the inclination of the pregnant uterus to the right is not the result of the natural habit of lying on the right side, the using principally the right arm (*Pajot*), the lateral position of the placenta (*Levret*), the shortening of the right round ligament (*Boivin*) or the anatomical position of the rectum (*Désormeaux*), but that it is owing to the inclined plane which the under surface of the mesentery presents to the uterus when it rises above the pelvic brim.

Universal Pruritus.—Dr. David Page relates the following case (*Brit. Med. Jour.*, Sept. 21, 1872). A lady, æt. 34, the mother of six children, was in the seventh month of utero-gestation, when he was summoned to attend her for some gastric disorder, as indicated by heartburn and acidity. It yielded to bismuth and quinine. A severe attack of facial neuralgia followed. Change of air was advised. The neuralgia ceased and an attack of universal pruritus began.

The whole cutaneous surface was affected with the most distressing itching, unaccompanied by any outward manifestation whatever. The paroxysms at first were chiefly at night, but soon became less intermittent, and were present throughout the day. Previously to her last confinement, a similar, though less severe train of neurotic phenomena had occurred. Treatment seemed useless. After a two weeks' trial of various remedies an attack of heartburn supervened, No sooner, however, did the gastralgia disappear than the facial neuralgia returned. Meanwhile the pruritus had disappeared. After lasting ten days, the neuralgia was superseded by the pruritus. Hydrate of chloral, in 20 grain doses at bedtime, was ordered. This produced sleep, and the patient awoke free from pruritus. A week later delivery took place. The pruritus did not entirely cease till ten days after confinement, although the severity of the attack was greatly modified when compared to the same symptom before parturition.

Variola during Pregnancy.—In the last edition of his work on midwifery Prof. Schroeder thus briefly states the present opinion of the best German authorities as to the probable prognosis in cases of variola occurring during pregnancy.

"During the course of variola, abortion may take place, the child being born either dead or alive. When born alive it is rarely affected with variola, but the disease usually breaks out soon after birth. Often, however, the pregnancy will run its regular course and the child may be born subsequently, either perfectly healthy or covered with the scars of small-pox. Cases are on record where children, whose mothers do not have the disease, have been born with the pustules on them, and even in cases of twins one child only has been seen more or less covered with the eruption, the mother being perfectly healthy. As a rule, vaccination will not take in children whose mothers have had variola during pregnancy."

Cases are on record in which vaccination of the mother during pregnancy seems beyond a doubt to have extended its protecting influence to the child. Nor can it be questioned but that a child may even die of variola in utero, or be born more or less covered with small-pox pustules, while the mother may wholly escape the disease. It would therefore seem proper to advise pregnant women, during epidemics of smallpox, to be vaccinated or re-vaccinated, in order that the fœtus in utero, as yet not vaccinated, may receive through the mother the protecting influence of the vaccination. So far as we know, vaccination during pregnancy has never produced any injurious effect on the mother or child.

In those cases where the mother has an attack of variola during her pregnancy, and the fœtus dies in consequence, the latter may be expelled at once from the uterus, or, as has been reported by Dr. Milne (*Trans. Lond. Obstet. Soc.*, vol. ix. p. 110), may be carried till full term, and then be thrown off covered with the traces of the disease.

In fatal cases of variola the child is usually thrown off the day before death (*Marson*).

It is probable that an interval of time elapses between the appearance of variola in the mother and in the fœtus, and this will account for the fact frequently noticed, that when a child is born during the primary fever of the mother, it has no eruption till some days later, if at all, while, if born after the secondary fever has appeared, it is usually more or less covered with the pock marks at birth, or may even be born dead.

Post-mortem Parturition.—Dr. Darby reported to the Dublin Obstetrical Society the following account of a case:—A patient, 24 years of age, the mother of one child, entered the Rathdown Fever Hospital with typhus fever. She was in the sixth or seventh month of pregnancy. She died four days after entrance. Owing to the smell from the body, she was at once removed to a small room adjoining the ward. The nurse, on entering the room some six or seven hours later, discovered a putrid fœtus, which, with the secundines, had escaped from the body.—(*Dub. Jour. Med. Sci.*, Sept., 1872.)

In a paper read (July 3, 1872) before the London Obstetrical Society, Dr. Aveling referred to forty-four cases of *post-mortem* parturition which he had found on record. From a careful examination of these cases, the reader deduced the following conclusions:—1. Expulsion of the contents of the uterus may take place after death without the aid of art. 2. This may occur in cases in which no symptom of natural parturition can be discovered before death. 3. Many of the manœuvres and accidents which take place in labor during life may occur in *post-mortem* parturition; such, for example, as expulsion of the placenta, spontaneous evolution of the fœtus, and the prolapse, inversion and rupture of the uterus. 4. Expulsion of the uterine contents, and accidents which accompany labor, may be caused after death, either by the contracting power which persists in the uterus after the death of the rest of the body, or by the pressure exerted upon the uterus by the gases of decomposition which are pent up in the abdomen. 5. Of these causes, the latter is the most frequent. 6. After the death of its mother, a child may continue to live in the uterus for many hours. 7. After the death of a woman undelivered, no time should be lost in removing the fœtus.—*(Lancet*, July 27, 1872.)

Labor and the Puerperal State.

Placenta Prævia.—Wallace. *(Edin. Med. Jour.*, Nov., 1872.) In a paper, read recently before the Obstetrical Society of Edinburgh, Dr. John Wallace, of Liverpool, calls attention to a new method of ascertaining the placental position, in cases of placenta prævia, by vaginal stethoscopy. A common stethoscope can be used, but a longer and curved instrument will be found more convenient. By carefully moving the stethoscope in all directions from the os uteri as a centre, the whole lower zone of the uterus can be explored in succession. When the presentation is central, the bellows murmur, which marks the position of the placental attachment, is heard over every part of the upper pelvic strait. If the attachment be partial or marginal, a combined vaginal and abdominal stethoscopic examination will detect the site of the placenta whenever it has an anterior or lateral position; while the posterior situation of the vaginal bruit, and the absence of the characteristic signs by an abdominal examination, will determine its partial presentation inferiorly and posterior situation superiorly.

As a mode of supplementing, but with no view of superseding, the existing methods of treating this class of cases, Dr. Wallace advises the topical application of a powerful hæmostatic directly to the immediate source of hæmorrhage. For this purpose he uses a solution of the strong liq. ferri perchloridi, one part to three or four of water, applied by means of pledgets of cotton-wool, with a withdrawing thread attached, directly through the os uteri to the ruptured utero-placental vessels. The application of these pledgets is to be repeated several times, and the last pledget introduced is to be left for twelve or twenty-four hours. The astringency of the application shrivels the mucous lining to such an extent that its vessels of nutrition are contracted and obliterated, and the membrane is shed, without however leaving any raw, ulcerated surface; and, in a similar manner, the vessels of the placenta are not only closed by elongated clots, extending to a pretty considerable distance along their course, but the fibrous tissues are so constringed that the part of the placenta so acted on has the feel and appearance of a solid fibro-cartilaginous mass.

In support of his new method of diagnosticating this abnormal position of the placenta, Dr. Wallace cites two cases in which he was enabled, by the use of the vaginal stethoscope alone, to predict the coming difficulty, while, in a third case, which certainly showed some of the symptoms of placenta prævia, a stethoscopic examination enabled him to make a more favorable prognosis, and the result in all three cases showed the accuracy of his diagnosis.

Some years ago, Nauche invented an instrument, since known as the metroscope, which he introduced into the vagina and applied directly to the neck of the uterus. In this way he claimed that, as early as the third month, the fœtal movements could be detected, and those cases in which the placenta was attached over the mouth of the womb could be recognized. The idea of vaginal stethoscopy, therefore, dates much earlier than would be inferred from the paper to which we have alluded. The topical application of a styptic is certainly an original plan, but one which should only be used in those cases in which the hæmorrhage is either very slight, or is easily controlled, as otherwise much valuable time would seem to be wasted, and the life of both mother and child often seriously jeopardized.

Convulsions during the removal of the Placenta. Death.—Dr. A. B. George reports the following case. *(Brit. Med. Jour.*, Oct. 12, 1872.) Mrs. W., aged 24, had been confined three times in two years. The first labor was normal. The second time, the placenta was adherent at a point near the fundus, requiring manual interference. Twelve months later, she was again in labor. The child was born ten minutes before the doctor arrived. The placenta still remained. She was cheerful; pulse regular and moderately firm. Flowing normal in amount. After waiting ten minutes, and finding that gentle pressure on the abdomen, combined with traction at the cord, failed to dislodge the placenta, he introduced the hand to remove it. The moment the hand was in the uterus the patient was seized with convulsions, accompanied by stertorous breathing, and died in less than five minutes.

Dr. J. Hall Davis has reported a case very similar to the above. *(Trans. Lond. Obstet. Soc.*, vol. xi. p. 285.) The patient, without exhibiting any symptoms premonitory of approaching convulsions, expired almost immediately when the hand of the operator had entered the uterine cavity. Dr. Ingleby has also reported a case in which, the moment the operator's hand had reached the uterus, the patient became violently convulsed, and died in less than a minnte. Dr. F. H. Ramsbotham also relates a case in which convulsions came on the moment his hand had entered the uterine cavity. In his case, however, the woman recovered. Fatal results, or even convulsions, rarely of course follow the introduction of the hand within the uterus; yet even one such case as that reported by Dr. George should put us on our guard against attempting to remove a retained or adherent placenta, without first administering an anæsthetic for the purpose of reducing to a minimum the uterine irritation necessarily occasioned by the introduction of such a foreign body as the operator's hand within the uterus.

Spondylotomy.—A successful case of this operation, under very peculiar circumstances, is reported by Drs. Affleck and A. Macdonald. *(Edin. Med. Jour.*, July, 1872.) The case was one of shoulder presentation, complicated with rigid os, prolapse of the funis, and such a decided narrowing of the conjugate axis at the brim as to render version impossible. The spine was found to be sharply bent back over the pelvic inlet, while the head was lying so high as to render decapitation exceedingly difficult, if not impossible. The point of section selected was the second dorsal vertebra, the instrument used being a pair of long vaginal scissors. The intercostal spaces were avoided, owing to the fact that both blades of the scissors were sharp, and the operator feared to use them as fearlessly as if one of the blades were probe pointed. The spine having been cut through, a foot was then drawn down, and the child delivered, although even then with considerable difficulty, owing to the pelvic deformity. The patient subsequently made a good recovery.

This operation, first recommended by Michaelis, was twice successfully performed by Sir James Simpson *(Edinburgh Med. Jour.*, Feb. 1866) in cases where, owing to the position of the child, he was unable either to turn or decapitate. In cases where version is impossible, decapitation or spondylotomy are the only chances left by which the mother's life can be saved. The latter operation possesses two great advantages over the former, inasmuch as the difficulty which often attends the subsequent delivery of the head is avoided and a much smaller surface of projecting bones is left, thus lessening the liability of serious injury being inflicted to the soft parts of the mother.

Puerperal Diseases.—In the last volume of the *Medical Times and Gazette* (July 6, 27, Aug. 24, Oct. 26), Dr. E. Copeman reports a third series of cases of puerperal diseases treated with turpentine. The series includes a variety of conditions coming on after delivery, in all of which, however, the symptoms were more or less indicative of that disease at present known as puerperal fever. A summary of the cases thus far reported by Dr. Copeman are as follows:—

		Deaths.	Recoveries.
1st series,	21	6	15
2d series,	36	13	23
3d series,	22	5	17
	79	24	55

The third series, which has just been reported, were, as a rule, ushered in with a chill, followed by rapid pulse, more or less disturbance of the lochia and milk, diarrhœa, tympanites, frequently cerebral symptoms and general depression. The treatment consisted in the use of turpentine fomentations applied over the abdomen in all cases where the tympanites was marked and accompanied by more or less abdominal pain or tenderness. Turpentine enemata were administered in those cases in which they were not contraindicated by pre-existing diarrhœa. In most of the cases, with the exception of those which were accompanied by excessive nausea and vomiting, the *oleum terebinthinæ* was administered internally, in doses varying from a half drachm to a drachm every four hours. Opium was also given to relieve pain and to produce sleep. No bad effects followed the use of the turpentine, but, in almost every case, a marked improvement seemed to follow its administration.

In a subsequent number of the same journal (Nov. 30, 1872), Dr. Copeman gives the account of eleven cases of *phlegmasia dolens* which were successfully treated by warm turpentine fomentations, kept applied constantly to the affected limbs. One of these cases was developed in a non-puerperal woman, while a second occurred in a man.

As regards the nature of puerperal fever, Dr. A. D'Espine has recently contributed a very long article which has been continued through several of the recent numbers of the *Archives Générales de Médecine,* in which he claims that puerperal fever is always the result of an absorption, by means of lacerations and wounds of the utero-vaginal canal, of a greater or less amount of septic material; the severity of the fever depending, in a great measure, on the amount of such material absorbed. The puerperal condition has no special connection with the production of this disease, as a very similar condition is produced in all surgical wards whenever there is a similar absorption of septic material. During the course of this septicæmia, puerperal pyæmia may occur as a complication, but in all such cases, as a rule, it coincides with a suppurative inflammation of the uterine veins. This complication of pyæmia is comparatively rare, and doubtless owes its origin to so-called septic embolisms. He utterly denies the existence of any such disease as milk fever, and claims that the fever which frequently occurs during the first seven days after confinement, is almost always due to the re-absorption of a portion of the lochia by the fissures or wounds of the utero-vaginal canal. It is possible for this condition to continue for some weeks, the lochia being in these cases, as a rule, fetid. A close examination will often detect in these cases an ulceration of the cervix uteri or vagina, which are the points of absorption.

[To be concluded.]

The Hospitals.

BOSTON CITY HOSPITAL.

Surgical Clinic by Dr. Cheever.—Dec. 3.

I.—*Abscess under the Pectoral Muscle.*—A young man, apparently healthy, though with a suspicious eruption on the forehead, presented an obvious swelling in the region of the right pectoral muscles and a partial obliteration of the axilla; considerable pain, and, in one place, an apparent effort to point. Abscesses in the axilla are most common in the cellular tissue, and arise in the axillary glands, which swell and inflame, causing a lump about the size of a nut, but usually making slow progress toward suppuration. Once open, pus exudes and continues to flow for a long time afterwards, as is usual in all abscesses where the lymphatic glands are involved. The case we have to-day is essentially acute, and therefore of a wholly different prognosis. It is tending to open and discharge, and as the superjacent tissues are so movable and the accompanying symptoms not severe, we shall not lance it at present. In a similar case in this hospital last year, there was found, when the abscess was opened, a very extensive burrowing under the muscles and into the axilla, requiring, before it could heal, daily syringing, and disinfecting treatment. We apply a poultice here to allay pain and to hasten suppuration, and especially direct the patient to keep quiet, and thus not extend the abscess by muscular action. The primary cause of these abscesses is usually traumatic. It may be, here, of specific origin, coupled with a low state of health. More commonly, however, they follow direct injuries to the parts. They must be distinguished from emphysematous infiltration of the cellular tissue, such as might follow a broken rib, letting out the air from the lung. The diagnosis of emphysema is made by the feeling of crackling under the skin, like pressing on a sponge. Deep abscesses, burrowing among the muscles, are always dangerous, but most especially when they occur in the neck. If, in these cases, the burrowing process is allowed to continue, the patient rapidly runs down in health, and even pleurisy might follow. Sex makes a great difference in abscesses in this neighborhood. In a woman, you would at once think of abscess of the breast, or even of a mammary tumor. Submammary abscess may occur in the female, during lactation, and tends to point towards the axilla. Again, mammary abscess proper may occur in a man, though the excess of female cases over males is 100 to 1.

II.—*Hand run over by a Wagon.*—There was great œdema of the back of the hand; the fingers were cold, but not so cold as to necessitate gangrene. The great danger was that pus would burrow up under the annular ligament, allowing the inflammation to extend up to the elbow. The pain is much less when the patient uplifts the hand, there being then less blood circulating in the limb. There were three or four lacerated cuts in the palm. Sloughing rarely takes place in the hand or fingers, or at most only of the tendons, because of the abundant supply of blood, and the proximity of the arm to the heart. In a similar wound in the foot you would expect sloughing of several toes, and this though the toes have a quadruple supply of arteries. Also in amputations of the foot and hand, the flaps of the foot are much more liable to slough, on account of the distance of the circulation from its central organ. The danger here is that on recovery, the tendons will become stiff and adherent. Therefore, towards the end of the case, we shall direct him to try to use them somewhat. For the present we shall keep them still on a splint. When the foot is injured, the patient keeps it quiet because of the pain caused by motion. Not so the hand, which does not have to bear the weight of the body.

III.—*Felon* [*Tendinous Whitlow*].—Felon is a suppuration beneath the fascia of the last phalanx of the finger or thumb. Its diagnostic appearances are, on the front or palmar surface, a white look, with a feeling of hardness extending down the finger toward the palm. On the back, there is usually redness and œdema, leading one to suppose the chief trouble to be situated there, whereas the pus always collects on the palmar side. In a deep whitlow, you do not get any fluctuation, because the trouble is so deep and the parts so tense. The pain is always excessive. An early diagnosis must be made and the treatment be decisive, else the young surgeon will find the result anything but creditable to him. The finger must be at once laid open to the bone, to allow free exit to the pus. Always open by cutting outwards from the palm, as then, when the patient shrinks and withdraws the hand, he helps you cut out the knife; and you are thus more successful in cutting to the bone at the first attempt, which in practice is an essential point, the agony of the cut being such that human nature will not allow you to try it a second time. The discharge of the pus is followed by immediate relief of the pain. If you do not recognize the necessity of opening it, the felon slowly proceeds to a natural opening, which is very small—about the size of a pin's head. This, when an abscess is in the soft parts, is of little consequence; but in one near any bone is extremely disastrous, leading to caries, sloughing of the last phalanx and shortening of the finger. The nail then rests only on the flesh, and turns inward, causing a deformity.

When the redness on the back of the finger is not accompanied with palmar hardness, we have abscess of the nail only (onychia), causing, if not opened, at most, loss of the nail, which, after a while, grows out again from the matrix. When the patient is of the laboring class, the skin and other parts are tougher, the felon is slower and the pain and suffering are proportionally greater, while the external appearances are less. In such cases we encounter greater risk of the burrowing of the pus to the palm, and this once accomplished, there is but little to prevent it extending up to the elbow. As a rule, the stronger the patient, the more danger if you do not open early. When the swelling has extended to the palm and forearm, the annular ligament sometimes gives a saddle-like appearance to the abscess, which requires to be immediately and freely opened to give exit to the pus. In incising palmar abscess, cut in front of the root of the thumb, thus avoiding the palmar arch which passes across the palm on a line with the base of the thumb, and if severed would present a most dangerous hæmorrhage. On the forearm, incise in the middle, thus avoiding the radial artery, and the ulnar artery and nerves, risking only the median nerve, which, however, lies very deep. Lately, in the journals, some surgeons have advocated opening a felon on the side, but the danger of lacerating the nerves, and the inconvenience of the bleeding of the digital arteries inclines Dr. Cheever to think the old way the best. Ether is not usually employed in opening felons, as the operation is but momentary, whereas the after-effects of ether are very unpleasant, especially in a private office.

[Dr. C. then opened a digital felon, and gave a practical exhibition of the agency of the patient in effecting a deep incision, provided the cut is made in a direction away from the palm.]

Mucous-tissue Tumor of Cheek.—A healthy-looking girl presented a movable tumor in the left cheek. It was thought to be a cystic tumor from occlusion of one of the salivary ducts, and was accordingly punctured with a trocar from within the mouth, but without result. An opening was then made through the mucous membrane from within, to avoid a scar of the cheek, and any paralysis from section of the branches of the facial nerve, and the tumor was readily enucleated and cut from its pedicle. On microscopical examination it was pronounced by Dr. Warren to be a myxoma, or mucous-tissue tumor, of the consistence of jelly, but not in any way connected with the salivary ducts.

One week later.—There is now an extensive œdema of the left cheek resembling mumps, and likely to last, even a month. Appearance otherwise natural.

One week later.—Œdema still very apparent and painful on pressure. At the third week, the incisions in the mouth were healed, but a small abscess pointed externally, was opened by a minute incision, and the patient was then discharged, well.

Hay-cutter Amputations.—Three fingers were reämputated after an accident from a hay-cutter. Dr. C. stated that some surgeons had thought that this operation could be spared, but if we let these and other similar clean accidental amputations alone, there results a much poorer kind of stump, with protruding bones and consequently tender extremities, and a very slow process of healing; whereas the stump we gain by surgical reämputation is well worth the loss of the additional half inch.

[Of the three fingers reämputated, one was amputated in the shaft and two at the joint. The two at the joint healed much quicker than the other. Is this always so?]

Compound Fracture of Elbow-joint.—Dec. 1st, an Irish boy, of about 19, suffered an injury of the right elbow, breaking off a T-shaped piece from the humerus. The outer condyle was broken off. The radius and ulna were uninjured. There was also an extensive lacerated wound on the radial side of the elbow, communicating with the joint. Notwithstanding these lesions, there was still perfect sensation and pulsation in the hand, which gave rise to the hope of saving the arm, as the arteries were still intact. It was found impossible to get at the ulnar nerve fragments through the wound caused by the accident, and accordingly a longitudinal incision was made on the ulnar side behind the elbow, through which the fragments were extracted, and the regular operation of excision of the joint performed. All the remaining articular surfaces of the joint were sawed off, the ulnar nerve (the important point in this excision) being carefully drawn to one side. The arm was slightly flexed, and laid in a hollow tin splint.

The incision in this case was made longitudinal in order to save the uninjured band of skin and fascia over the tendon of the triceps muscle, insuring a freer use of the limb after recovery. Dr. C. thinks that the transverse incisions which are spoken of in the books are injudicious, and tend to impair needlessly the future usefulness of the limb. In the present case, the wounds, now a week old, are doing very well, though the clean cut surgical incision is granulating more freely than the ragged wound of the accident. After a while, we expect to be able to put on an external angular splint, and allow the patient to sit up In a similar case in the wards a year ago, where the patient had previously lost the leg on the same side in a former accident, although the band of the skin in front of the elbow was narrower and the pulsation in the hand feebler, and there was also great loss of soft tissues behind, we yet were able to save the limb; which was doubly important to the patient, as with the leg and arm both lost on the same side, locomotion would have been difficult, from defect of balancing power.

At the third week the patient had a small abscess point at the flexure of the elbow. This was opened, and he is now doing extremely well.

Bibliographical Notices.

Expression of the Emotions in Man and Animals. By Charles Darwin, M.A., F.R.S., &c. Pp. 374. New York: D. Appleton & Co. 1873. (From A. Williams & Co.)

Probably no one has taken up this latest work of Mr. Darwin without a preconceived idea that it was written in support of the author's well-known views; an impression which loses none of its force during the perusal of the book, though no direct statement is found to warrant it. On the last page is the following passage, which is of importance as showing Mr. Darwin's position: "We have seen that the study of the theory of expression confirms to a certain limited extent the conclusion that man is derived from some lower animal form, and supports the belief of the specific or sub-specific unity of the several races; but as far as my judgment serves, such confirmation was hardly needed." Nevertheless, there is an evident desire throughout to maintain these points, but, by an error identical with that which the author committed in that part of his preceding work* which treats of the descent of man, evolution is continually used as a well-accepted fact for the support of doubtful ones. The methods of investigation, the number and diversity of sources from which information has been obtained, the careful and long-continued observation of children, neighbors and animals, are all admirable and worthy of the author of the "Origin of Species." On the other hand, some of the conclusions may be questioned, much of the physiology is vague, and the frequently recurring "contraction of the central fasciæ of the frontal muscle" is incomprehensible.

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* The Descent of Man and Selection in Relation to Sex.

Mr. Darwin believes that most expressions and gestures may be accounted for by the following three principles: 1st. "*The principle of serviceable associated habits*," which, in brief, is that as certain gestures are of service under certain circumstances in certain states of the mind, the recurrence of that state of mind will cause a repetition, to a greater or less extent, of the action in question, though it be of no use, or, at least, will occasion an effort to repress this manifestation which will itself be expressive. 2d. "*The principle of antithesis.* Certain states of the mind lead to certain habitual actions which are of service, as under our first principle. Now when a directly opposite state of mind is induced, there is a strong and involuntary tendency to the performance of movements of a directly opposite nature, though these are of no use; and such movements are, in some cases, highly expressive." 3d. *The principle of actions due to the constitution of the Nervous System, independently from the first of will, and independently to a certain extent of habit*," which is to account for what cannot otherwise be explained, which is one of the recognized duties of the nervous system.

The first principle is the one most easily studied, and a strong case is made from it. The following is an example of its action. A dog, wishing to approach its prey without being observed, often doubles one leg up under him and pauses so as to advance as noiselessly as possible at a favorable opportunity, and this habit causes him to take a similar position when listening to any uncommon sound. Mr. Darwin has observed this when the dog was separated from the sound by a high wall so that it could have had no idea of advancing. The difficult subject of reflex actions is necessarily brought up. The fact that actions which were originally voluntary may be performed unconsciously and even unnecessarily is accounted for by the statement that "in such cases the sensory nerve-cells excite the motor cells, without first communicating with those cells on which our consciousness and volition depend." The second principle is more difficult to establish. The sudden change in the bearing and expression of a dog, who, going out savage and on the alert to inspect a supposed stranger, suddenly recognizes in him his master, is given as an example. The author accounts for the dog's position in the former state of mind by showing that in every respect it will be of service to him in his contemplated attack, but he cannot account for the sudden relaxation and humble aspect, &c., as these are of no use to the animal, except by saying that the whole expression is precisely the opposite of that which would be useful in the opposite state of mind and that it serves to make the animal's feelings plain to others. The third principle has to account, as best it can, for the sudden blanching of the hair, trembling, profuse perspiration from mental causes, and the increased or diminished secretion of certain glands.

Two very good chapters are devoted to the expressions of animals, and throughout the book there are interesting instances of some that are strangely human. For instance (p. 167) "The Indian elephant is known sometimes to weep. Sir E. Tennent, in describing those which he saw captured and bound in Ceylon, says, some 'lay motionless on the ground, with no other indication of suffering than the tears which suffused their eyes and flowed incessantly.'" On page 215, there is a description of the meeting of two chimpanzees which were introduced to one another in captivity. "They sat opposite, touching each other with their much protruded lips; and the one put his hand on the shoulder of the other. They then mutually folded each other in their arms. Afterwards they stood up, each with one arm on the shoulder of the other, lifted up their heads, opened their mouths, and yelled with delight."

The most important part of the book is that which treats of the mechanism of human expressions and in which it is attempted to explain their derivation. The subject of weeping (chap. vi.) furnishes an example of a kind of reasoning too often met with in this work. "The nature of the relation between the involuntary and energetic contraction of the muscles round the eyes, and the secretion of tears, cannot be positively ascertained, but a probable view may be suggested." One of the chief functions of the tears being to wash the eyes, the argument is continued as follows: "It is difficult to conjecture how many reflex actions have originated, but in relation to the present case of the affection of the lachrymal glands through irritation of the surface of the eye, it may be worth remarking that, as soon as some primordial form became semi-terrestrial in its habits, and was liable to get particles of dust into its eyes, if these were not washed out they would cause much irritation; and on the principle of the radiation of nerve-force to adjoining nerve-cells, the lachrymal glands would be stimulated to secretion. As this would often recur, and as nerve-force readily passes along accustomed channels, a slight irritation would ultimately suffice to cause a free secretion of tears." It is then argued that irritations of various kinds, among others the pressure from the contraction of the orbicular muscles in crying, would have the same effect. "We may see, as lately remarked, the muscles round the eyes of a person who reads a pathetic story, twitching and trembling in so slight a degree as hardly to be detected. In this case, there has been no screaming and no distention of the bloodvessels, yet, through habit, certain nerve-cells send a small amount of nerve-force to the cells commanding the muscles round the eyes; and they likewise send some to the cells commanding the lachrymal glands, for the eyes often become at the same time just moistened with tears. The author holds that if the former manifestations be repressed, the glands, being less under the control of the will, may still act alone; an explanation which, however necessary for the theory, is hardly satisfactory *per se.*

Blushing (chap. xiii.) for shame (distinct from reddening with passion) is, perhaps, the most decidedly human expression of emotion. Animals never blush. The author shows that it is common to most races of men, and that in those who go but slightly covered it occurs over a larger part of the body than in the civilized. As blushes result from causes (real or imaginary) which bring the observation of others upon us, it attacks the part to which attention is most likely to be directed, namely, the face, especially when that alone is uncovered. Hence, anyone likely to blush thinks more of his face than of the rest of the body, and thus modifies its innervation. It may be said, on the other side, that the face is the most vascular part of the surface, and it is asking a good deal to call on us to suppose that the peculiar distribution of its vessels was essentially modified by so insignificant a cause as blushing.

The book is very readable, and will be found very instructive by any reader, whether he fully accepts the author's conclusions or not.

T. D., JR.

Boston Medical and Surgical Journal.

Boston: Thursday, February 13, 1873.

We have received the Fourth Annual Report of the Children's Hospital, embracing the record of the work of the year just ended. It is a compendious statement of progressive success as regards the practical benefits which, in a medical point of view, the hospital has extended to a class of patients not included in any other hospital scheme in the city. Eighty-two children have been received as patients during the year, embracing twenty-four medical and fifty-eight surgical patients. The mortality amounted to only five.

We sincerely trust that this institution may in the future greatly enlarge the scope of its usefulness. There is abundant opportunity for just such a charity, while the obvious possibilities in the way of scientific observation need no favorable comment at our hands. But in the face of such a hope comes the opening statement of the report that while the "experiment" of the hospital has succeeded beyond the hopes of its founders, they are compelled to confess a critical condition of its finances. Surely, the liberal friends of this institution will not allow its future to be jeopardized for the want of means to carry it forward.

The late Emperor, Napoleon III.—It appears from recent and authentic advices from abroad that the Emperor's death was due to uræmia, ending in suddenly fatal coma, and not to chloroform, as was intimated by the telegraphic despatches. The probable presence of secondary renal disease, consequent on the progressive development of the calculus, was premised by the medical attendants and precautions taken accordingly.

The *Medical Record* (London), in commenting on the case and its complications, observes: "Had the sudden death of the Emperor, which took place an hour before the time appointed for the administration of chloroform for the purpose of an operation, occurred, as it might well have done, while he was under the influence of the anæsthetic, it could hardly have failed to be set down to the temporarily debilitating action on the heart. There would have been nothing in the results of the *post-mortem* examination to contradict such a theory, as the appearances noted lead to the conclusion that death resulted from a sudden failure of the heart's action. The Emperor had taken chloroform four times, and had always passed under its influence satisfactorily, and suffered no inconvenience from its inhalation. It speaks highly for chloroform, and for the care with which its administration was regulated, that this should have been so in a case where there was so large an amount of organic disease, and where the heart subsequently showed itself so prompt to fail."

Correspondence.

UNHEALTHY RE-VACCINATION.

MESSRS. EDITORS,—Now that, according to the papers, "the decided measures of the Board of Health have stopped the smallpox to such an extent that vaccination is virtually at an end," it may be allowable, without injury to the trade in virus, to quote the following from a late number of the *British Medical Journal.* It shows at least that too great care cannot be taken in selecting the sources of virus of every kind.

"*L'Imparziale* states, on the authority of the *Gazetta della Spezia*, that recently seventeen persons were admitted into hospital, after re-vaccination, with large phlegmonous swellings of the arms at the point where the operation had been performed. In one man, a sailor, sloughing took place, and was followed by death. The cases occurred in persons who were all re-vaccinated on the same day; and none of those operated on on other days were affected. The occurrence is attributed to bad lymph—taken probably from a diseased cow." SALUS.

THE FEE FOR MEDICAL EXAMINATION FOR LIFE INSURANCE.

MESSRS. EDITORS,—The remarks in your last issue, under the editorial head, are not only entirely just and true, but they also cover the ground so completely, that there is but little else for those specially interested in the matter to do, except heartily to endorse them. In doing this, however, I will take occasion to refer to certain points more particularly.

First, the value of the *time* given by the medical examiner, the portion of the day from which it is taken, and the frequent chances that, during this period, no remuneration whatever accrues to the examiner. Most companies desire but one hour's service at their offices—others require one and a half, or two. To each of these periods it is fair to add from one half to a whole hour, consumed in going to and from the office; so that, on an average, two hours, and those the very best in the day for the practitioner, are thus given to the life office. If, in addition—as so frequently happens—no applicants appear, the loss to the examiner is evident enough. To examiners who are *salaried*, this, of course, is, personally, of far less consequence. If fairly paid, they can better afford to sit idle for an hour or more; but it is a very common thing for them to lose valuable cases while they are thus in attendence at the life office. But those examiners who are salaried feel that it is only fair that they, when examining for other offices, should receive a proper fee, both on their own account and on that of their brethren who are not, as they are, paid whether applicants come in or not. The office for which I examine, has, I am happy to bear witness, shown itself generous and just during the entire term of my service—from 1859 to the present date; and, some time since, volunteered to pay all medical gentlemen who came in to do duty in the absence of their own examiner, *five* dollars.

Secondly: Influenced by these considerations and with this view of the subject, I have several times made efforts to have the general fee raised to the sum last named—regarding that as the least fee that should be offered to a competent physician for the duty demanded. No success has attended these efforts. While it is a well-known fact that the amount mentioned is constantly paid in New York city without hesitation, companies whose headquarters are in that righteous emporium refuse to pay examiners here more than *three* dollars, simply because that has hitherto, for some time, been the fee; and so long as they can get the work done for that sum, they will continue to refuse the application of faithful and long-tried men for an advance. Why is an examination of this sort worth less to a life company in Boston than in New York? The risk is the same—the premium the same—the labor the same—why not the fee? It is within my memory that two dollars, and even *one* dollar, was thought enough for a medical examiner for life insurance! The offer of such fees for such services is an insult to a hard-worked profession—whose members, it is safe to say, do more gratuitous work for the community than any other set of men in it. The fact is, that five dollars for an examination which throws so much responsibility upon the examiner, and which frequently "involves many thousands of dollars," is the very least that a rich and prosperous life office should offer to a physician whose opinion is confessedly of vital importance to its interests. When the commissions paid to solicitors and agents are compared with the remuneration extended to so important an officer as a trained medical examiner, the "look of the thing" would be ludicrous, were it not monstrous for its injustice.

Lastly: If flourishing and rich corporations in Life Assurance care to have trustworthy and fully qualified medical examiners, they ought to pay them fairly and cheerfully; and not add to the hardness of a refusal to raise the fee to a right standard, the taunting intimation *that plenty of doctors can be found to do the work at the lower rate.* If this latter assertion is true, the sooner medical examiners who look for a proper return for their services *put it to the test*, the better. We leave it for those concerned, *in all quarters*, to decide who will put in the best appearance, and make the most in the end!

Boston, Feb. 7, 1873. M.

VIVISECTION.

MESSRS. EDITORS,—In a closing lecture to a course on anatomy, given by Dr. Physick, of the University of Pennsylvania, more than forty years ago, and I believe it was his last lecture, he urged earnestly on the students that they should "on no account practise vivisection on dumb animals;" for, he said, "it was cruel and inhuman, and the benefit does not justify the suffering inflicted." "Indeed," he said, "he had yet to learn that any real benefit had arisen from the practice." His language and his feelings on the subject were strong, and have probably had a salutary influence on the minds and subsequent practice of those who heard.

After the long interval that has elapsed, distinguished by its amount and variety, and, may it not be said, by its extreme cruelty of vivisection, can it not be now asked with still more intenseness, *has it paid?* Was there not a propriety in the interposition of Mr. Bergh, the apostle of the dumb animals, in calling to account a distinguished physiologist of this country? It is, however, gratifying that in the case alluded to the reply seemed to have been satisfactory. And is it not true that the vivisections on this side the Atlantic have not, in the general, been very numerous or specially fraught with inhumanity?

There have, however, been exceptions. Some years ago a medical professor, residing in one of our Western States, published in a medical journal a series of experiments performed on the crocodiles in Georgia, so heinous and revolting for cruelty that the writer of this sent a remonstrance, to be published in the same journal, but it was declined.

In the Boston Medical and Surgical Journal of the 23d of January is a brief notice, half apologetic for vivisection, and intended apparently to divert attention to other issues. It is signed H. P. B., and charges the late "loss of millions of money and scores of human lives" to the head of the fire department, who, he says, "in obedience to an exaggerated public sentiment, refrained from risking the lives of a few sick horses." The commissioners appointed to investigate the causes of the fire, report:—"It will not be supposed that the horses were dispensed with from motives of humanity. The horses of the department were not used because they were generally unfit to be used, and would not have gone so fast as the men did." This settles the matter of having gone "to a vicious extreme." To close, let an old man say to H. P. B. that it would be far more noble in him and in others to unite in the benevolent and humane work of saving our dumb animals from unnecessary suffering than of sneering at those who do not seem to bestow a proper amount "of their attention upon the much severer mutilations inflicted by sportsmen." SENEX.

Medical Miscellany.

DR. A. M. SUMNER has been appointed a Physician to the Children's Hospital, *vice* Dr. F. B. Greenough resigned.

AN INTERNATIONAL PHARMACOPEIA is in preparation in Europe, designed to secure uniformity in Pharmaceutical preparations.

SMALLPOX IN BERLIN.—According to Dr. Guttstadt, in a paper read to the Berlin Medical Society, the number of deaths from smallpox in Berlin for the year 1871 was 6478. At the beginning of the epidemic, there were, at least, 20,000 individuals who had not been vaccinated. Of these, 14 per cent. were seized with variola, while of the vaccinated only 2 per cent., and of the re-vaccinated ½ per cent. became subjects of the disease. Of the non-vaccinated, 42 per cent. died, of the vaccinated, 16 per cent., and of the re-vaccinated, 15 per cent.—*London Med. Times and Gazette*, Jan. 25th, 1873.

DR. HENRY C. PERKINS died February 1st, at his residence in Newburyport, after an illness of but a few hours' duration. The attack was one of angina pectoris, to which Dr. Perkins had been subject for many years. He was 69 years of age. Graduated from Harvard College in the class of 1823, while in his 19th year, he studied medicine with the elder Dr. Warren, of Boston, and with Dr. R. S. Spofford, of Newburyport, commencing practice in 1827. He rapidly rose in his profession, and at the time of his death was honored by his medical brethren to a high degree for his skill and science. He was a patient student in meteorology, astronomy, chemistry and botany, and was the first person in America to use the portrait-taking process of Daguerre. It is related of him that he learned the German language when sixty-five years of age, for the purpose of translating a work of Hallier on disease germs. He was President of the Massachusetts Medical Society for two successive years, and has occupied many important public positions. He was a member of the American Academy of Arts and Sciences, and of the Committee on the Observatory of Harvard College.

GALVANO-ACUPUNCTURE FOR AORTIC ANEURISM. Prof. E. De Renzi reports a case thus treated, and reviews the records of other cases. In his own case the battery used was one of twenty-one elements; the zinc plates four to five centimetres broad, by eight long, immersed about half their length. The index stood at sixty when the circuit was open, at twenty when it was closed. Six needles were inserted, and each pole was attached for five minutes to each needle, so that the whole operation lasted an hour. On the seventh day the man died of rupture of the sac. An autopsy showed no trace of any clot near the points where the needles had entered, but some evidence of inflammation. The conclusions to which Prof. De Renzi is led, by his review of Ciniselli's cases and others, are—1. That no case is known of a complete and permanent cure of aortic aneurism by galvano-acupuncture; 2. That the cases of apparent cure are more readily explained by the irregular course of the disease, and the effects of quiet and good hygienic influences; 3. That the operation is harmless in itself, but may be the indirect cause of mischief by inducing changes in the walls of the sac, rendering them more liable to burst.—*Nuova Liguria Medica.*

NATIONAL BUREAU OF HEALTH.—It is proposed to establish a National Bureau of Sanitary Science, to be located in Washington, and to be a branch of the Department of the Interior. A bill for the purpose is about to be introduced in Congress providing for the appointment of a Commissioner and assistants versed in sanitary science, whose duty it shall be to acquire and diffuse among the people useful information relating to the preservation of the public health, and aid in the establishment of sanitary and quarantine rules. The House Committee on Education and Labor, it is thought, will report favorably on the bill, and it is not improbable that it will pass both houses during the present session.

NOTES AND QUERIES.

MESSRS. EDITORS,—The cases of death from vaccination were both cases of re-vaccination.
L. H. LUCE.
Falmouth, Feb. 3, 1873.

PAMPHLETS RECEIVED.—Myringectomy, followed by Decided Improvement in the Hearing Power. By J. S. Prout, M.D., of Brooklyn, N.Y. Albany. 1873. Pp. 10.—Sixth Annual Report of the Board of Trustees and Officers of the Minnesota Hospital for the Insane, for the year ending Nov. 30, 1872. St. Paul. 1873. Pp. 42.—Burns and Scalds; their Treatment, with Cases. By J. F. Montgomery, M.D. San Francisco. 1873. Pp. 24.—A Case of Anchylosis of the Hip-joint of fourteen Years' Duration. Successful Operation for the formation of False Joint. By A. G. Beebe, A.M., M.D. Chicago. 1873. Pp. 8.—Transactions of the Medical Society of the State of West Virginia. Wheeling. 1872. Pp. 335 to 432.

DIED,—At Rutland, Feb. 3d, B. H. Tripp, M.D.

MORTALITY IN MASSACHUSETTS.—*Deaths in fourteen Cities and Towns for the week ending February* 1, 1873.

Boston, 166—Charlestown, 21—Worcester, 15—Lowell, 14—Milford, 2—Cambridge, 19—Salem, 6—Springfield, 10—Lynn, 12—Gloucester, 9—Taunton, 8—Newburyport, 4—Somerville, 8—Haverhill, 4. Total, 298.

Prevalent Diseases.—Consumption, 57—smallpox, 52—pneumonia, 30—scarlet fever, 9—croup and diphtheria, 7—typhoid fever, 7.

The deaths from smallpox were as follows:—In Boston forty-two, Gloucester four, Lynn two, Charlestown two, Cambridge one and Somerville one.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, February 8th, 157. Males, 76; females, 81. Apoplexy, 4—inflammation of the bowels, 1—bronchitis, 1—inflammation of the brain, 4—congestion of the brain, 1—disease of the brain, 5—cerebro-spinal meningitis, 2—cancer, 1—cyanosis, 1—caries, 1—consumption, 16—convulsions, 5—croup, 2—dyspepsia, 1—debility, 1—dropsy of the brain, 5—drowned, 1—dysentery, 1—diabetes, 1—diphtheria, 1—scarlet fever, 8—typhoid fever, 3—disease of heart, 11—hæmorrhage, 1—infantile, 2—disease of the kidneys, 3—laryngitis, 1—disease of the liver, 3—congestion of the lungs, 2—inflammation of the lungs, 11—marasmus, 7—old age, 8—paralysis, 1—pleurisy, 1—peritonitis, 1—puerperal disease, 1—suicide, 1—syphilis, 1—smallpox, 24—teething, 3—whooping cough, 2—unknown, 3.

Under 5 years of age, 56—between 5 and 20 years, 15—between 20 and 40 years, 41—between 40 and 60 years, 21—over 60 years, 24. Born in the United States, 103—Ireland, 36—other places, 18.

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Original Communications.

CAUSES AND TREATMENT OF STRABISMUS.

By J. J. B. Vermyne, M.D., New Bedford, Mass.

[Concluded from p. 159.]

In the treatment of strabismus, much depends upon the possibility of having the patient assist in the cure, and on the duration of the case. In beginning cases, we must ascertain whether there exist maculæ corneæ or other opacities in the transparent media of the eye, or deviations in the power of refraction, or diminution in the strength of vision in one or both eyes. In infants and very young children, it is difficult to make sure of this, except when there are opacities of the cornea, or other defects, visible to the naked eye. In such cases, it will be necessary to ascertain what circumstances are most apt to produce and aggravate the deviation, and, as much as possible, we must try to avoid them. The oftener the eye comes in the wrong direction, and the longer it remains there, the more danger there will be that the deviation will at last become permanent. If this is observed, we must talk to the child and teach it to see in the right direction, or we must prevent staring at near objects, by rubbing the eyes gently with the hand or by causing the eyelids to be closed and opened consecutively for a few times, and then make the child look at some remote objects. In case of myopia or hypermetropia, help must soon be sought in glasses, or some occupations and plays must be forbidden for some time. Variation in the use of glasses will prove very beneficial. In more intelligent patients we may succeed, in the manner stated above, by covering the best eye with the hand, and having the deviating eye directed towards the object. We have said there, that the eye can remain in that direction, even after the hand has been removed, and that both eyes are well directed for some time. This already makes a beginning of cure, and further exercise with a looking glass often relieves the deformity permanently.

If we discover difference in the power of refraction or the strength of vision of both eyes, the use of glasses can sometimes be of great help in restoring the right direction. The oldest glasses in use for strabismus were dark shells, with a small opening in the middle, just in front of the pupil. If there is any advantage in the use of these glasses, it is only that objects lying at the side of the deviating eye are seen with that eye, because the patient must turn his head round to see them with the other eye. In this way, the power of sight will not so rapidly decrease. Or we may lessen the strength of the best eye by covering it with a dark-blue glass, or by covering part of the glass on the inner side of the best eye for $\frac{1}{4}$, $\frac{1}{3}$ or $\frac{1}{2}$ with black court-plaster. If, for instance, a person has strabismus convergens of the left eye, and we cover the inner part of the right glass in such a manner that he cannot perceive the objects lying at the left side without turning his head in that direction, he will be obliged to use his left eye, and will thereby prevent the loss of vision which would soon follow, and increase the intensity of strabismus. For the best way is to correct either the manifest, or the total hypermetropia, by the corresponding glasses. But, as Arlt observes, if the children do not coöperate, it is best not to trouble them too much. Strabismus can certainly be cured in this way; but if we could record a great number of successful cases, the number of operations would have been much smaller, and the operation itself would never have created the interest it did, and would never have reached the point where it now is.

The original idea of an operation for strabismus was given by Stromeyer in "*Beiträge zur Operativen Orthopædie*, 1838," but it was first performed by Dieffenbach on the 26th of October, 1839. The first operation was on a boy with strabismus convergens. The patient is sitting in a chair, the eyelids are kept apart with eyelid holders. With two sharp hooks the conjunctiva is taken up, about half way between the cornea and the caruncula lachrymalis, and the fold is incised with a pair of scissors. Through this wound the anterior part of the straight muscle appears, only covered with loose cellular tissue. A blunt hook is brought under the muscle, the muscle is lifted up and cut through with the scissors at some distance from the point of insertion of the tendon.

At first the result was very striking; the new operation was generally adopted, modified, and by the operators extolled to the skies. So many communications of successful cases were received, so many pamphlets written, that Dieffenbach himself, in his *Operative Surgery*, 1845, ii. p. 164, says: "The number of pamphlets and articles about strabismus has become so numerous from all parts of the world, that many operations more than a thousand years old cannot boast of so many monographs as this operation, which only dates from 1839."

But with the increasing number of operations, successfully performed, increased also gradually the number of deviations to the opposite side, caused by subsequent insufficiency of the divided muscle. The deformity resulting from this cause was often worse than the original complaint, and the operation was fast losing its credit when Lucien Boyer pointed out the causes of failure. He proved that the incised tendon or muscle did not heal by interposition of exudation, as happens with other muscles and tendons, but that the anterior part completely atrophies and the posterior part retracts, unless retained by new connections with the sclerotica.

By making use of Boyer's discoveries, von Graefe modified the operation; and although it is variously performed at different places, the principle is yet the same. According to him, the tendon must be divided as nearly as possible to the insertion in the sclerotica. And as the tendon not only connects with the sclerotica, but also with the capsula Tenoni, the cellular tissue which surrounds the eyeball, the muscle would retract but very little, unless more room can be obtained by cutting this tissue in different directions.

Von Graefe's operation is as follows:—The patient is placed in reclined position; the surgeon sits next to him, at the head of the operating table. Four assistants are needed (in all operations v. G. uses a great number): one to fix the head with both hands; the second to keep the eyelids apart; the third, with a pair of pincers, directs the eyeball to the side opposite to the strabismus, while the instruments are handed by the fourth. The operation is performed under partial chloroform-narcosis. The conjunctiva is taken up with a pair of fine pincers, and with sharp-pointed scissors an incision is made in the conjunctiva, parallel to the margin of the cornea. The operation is continued by separating the conjunctiva from the connective tissue, and bringing a blunt hook in the wound. This is placed at a very short distance from the tendon, and, by a slight turn round its axis, it slips under the tendon. The wound in the conjunctiva is kept open with the points of the scissors, and the conjunctiva itself made free from the point of the hook, and we now have the place where the tendon is connected with the sclerotica before us, and the tendon itself is divided with a pair of scissors. After allowing the patient to rest a few minutes, he examines the result, by directing the eye in an angle of about 45 degrees in the direction opposite to the strabismus. If not enough effect is obtained, the capsula Tenoni is cut in a little farther. If too much, one or two sutures are applied to the wound of the conjunctiva.

Arlt, of Vienna, operates somewhat differently. Having made the wound in the conjunctiva, he lifts the tendon up with forceps, after having first divided the connective tissue with curved scissors, and cuts it, as in von Graefe's operation.

At Moorfields Hospital, England, a different method is followed. The wound in the conjunctiva is not made perpendicularly to the direction of the tendon, but parallel to the last, more remote from the margin of the cornea. Bringing the scissors in this wound, the cellular tissue is incised, and a slightly curved blunt hook is inserted between sclerotica and tendon; and, as near to the sclerotica as possible, the tendon is cut through with straight, blunt-pointed scissors. This method of operation is called the sub-conjunctival method. The advantage here claimed is, that the wound in the tendon remains covered by the conjunctiva; but its very serious disadvantages are, that we are not able to regulate the effects, as in other operations, and that there often appears a serious extravasation of blood under the conjunctiva. For this reason, Bowman very often makes a counter-puncture at the other side of the tendon, to allow the blood to escape.

The different methods here described have one great disadvantage; after some time, in most cases, the caruncula lachrymalis is retracted, drawn backward, and a very disagreeable deformity is produced.

It was Liebreich, whose name has been recently brought before the public again, in connection with the Turner question, who discovered the causes of this disagreeable result, and modified the operation so as to prevent it. He pointed out that there exists a connection between the conjunctiva and the exterior surface of the anterior section of the capsula Tenoni, which connects the tendons of the four straight muscles at their insertion in the sclerotica. Through this connection, the external part of the plica semilunaris and of the caruncula follow the inward movement of the eyeball, when the inner straight muscle is strongly contracted. The same effect is produced by excessive retraction of the muscle, after tenotomy, with extended result. For this reason, Liebreich separates the conjunctiva from the capsula Tenoni clear under the plica semilunaris, and even under the caruncula. The rest of his operation is like von Graefe's, and as the wound in the conjunctiva is generally large, he closes it with a suture.

Dr. Snellen, of the Utrecht Ophthalmic Hospital, operates as follows:—The patient is in reclined position. Chloroform is only administered at urgent request, or in children who are very restless. He prefers to have no chloroform-narcosis, so as to be better able to judge of the effect. Only two assistants, one for the instruments, the other for fixation of the head, are needed. Critchett's eyelid-holder keeps the eyelids apart. The bulbus is not fixed, but the patient himself directs his eye in the necessary position. Very near to the margin of the cornea, where it is least movable, a very small opening is made in the conjunctiva. The cellular tissue, between the conjunctiva and capsula Tenoni, is divided in all directions by small cuts with the scissors. The conjunctiva is next taken up near the caruncula, and the separation of conjunctiva and caruncula is continued. The blunt hook is now placed under the tendon, but in place of turning it in a perpendicular direction, it is kept horizontally as much as possible, to prevent enlargement of the wound. The scissors, with points closed, are now placed within the wound, and then and there opened, cutting through the tendon under the conjunctiva. For the small conjunctival wound, no suture is needed. In these subconjunctival methods it will be strictly necessary to use blunt-pointed scissors, to avoid wounding the sclerotica.

This method generally shows satisfactory results from the small wound and the subconjunctival division of the tendon; there are some other troubles, however, which may occur after the operation. Sometimes double images follow, at other times strabismus, although relieved when the patient looks straight forwards, does continue, either inwards or outwards, when the patient looks up or down. This depends upon inequality in the cutting of the capsula Tenoni, which cannot easily be controlled in the subconjunctival methods of operation. For this reason, Snellen, of late, changed his method as follows: The incision is not made perpendicular to the direction of the muscle, but in its meridian. The instrument used, a pair of straight, sharp-pointed scissors. The wound can be made rather large, because the direction of the wound causes its lips to close when the eye is moved in the opposite direction, whereas perpendicular wounds open under the same circumstances. Next, each of the lips of the wound is lifted up separately, and upward and downward the conjunctiva is detached from the capsula in equal extent. The caruncula is then separated from the underlying tissues as in his first method. A pair of pincers is brought into the wound closed; there they are allowed to open, whereby the wound is widened a little, and now, by softly closing the forceps under a slight pressure, the tendon is caught in them. With the point of the scissors, a little opening is made in the tendon, as near its insertion as possible. In this opening one of the arms of the scissors is inserted, and, in both directions, upwards and downwards, the tendon is equally divided. With the blunt hook he tries, if there are still some posterior adhesions, which must be cut.

It will be seen that this operation combines different points of operations already described, in that it makes a meridianal wound, as the English school does, in place of a perpendicular one—in taking the tendons up with pincers, as Arlt does, in place of the blunt hook—in operating *à jour*, as von Graefe, and in following Liebreich, where he advocates a further separation between conjunctiva and capsula till under the caruncula lacrymalis. The manner of dividing the tendon is quite new.

He claims for this operation, which I, for one, prefer to any of the others, and have accordingly adopted in my practice:—

1st. That it is easier, because there is less danger of wounding the eyeball, as the operation is made *à jour*.

2d. That it is less painful, because the disagreeable pressure of the blunt hook is avoided.

3d. That there is no danger of extravasation under the conjunctiva, as in the English method.

4th. That we have complete control of the cutting of the capsula in one or other directions, according to the desired effect.

As a general rule, after operation for strabismus, the patient must move his eye in the opposite direction, or we can give him spectacles, partly covered with black courtplaster, as was stated before.

It is the place here to speak of another operation, which was called forth by the bad results in some of Dieffenbach's operations. It is directed against the insufficiency of the divided muscle and consequent strabismus in the opposite direction. Dieffenbach himself already tried to remedy this, by cutting the antagonistic muscle, and tying a silk thread to the part still connected with the sclerotica. By means of this thread he turns the eyeball inward, and by fixing it on the nose, keeps the bulbus in position. Jules Guerin modified this operation by loosening the insufficient muscle completely, following for the rest Dieffenbach's directions. His method was slightly modified by von Graefe, who, in place of detaching the insufficient muscle completely, does so just enough to make it movable; he also applies the thread first and cuts afterward. This operation is known as the operation of Guerin and von Graefe, in German, *vorlagerung*.

Another plan of operation was followed by Critchett. He incises the conjunctiva on the side of the insufficient muscle at a distance of two or three mm. from the cornea, and cuts an oval piece out of the conjunctiva. The tendon is made loose from the sclerotica in the usual way, but without separating it from the surrounding cellular tissue. To fix the divided tendon in the peri-corneal part of the sclerotica, he brings a fine needle with silk thread first through the conjunctiva, next through tendon and conjunctiva together, and ties it. He sometimes applies three to seven sutures. He calls this operation the operation for readjustment; in Germany, it is called *vornaehung*, to distinguish it from the vorlagerung of Guerin and von Graefe.

It seems that this operation, which certainly has room for improvement, is the operation which will be indicated when paresis of the antagonistic muscle is undoubtedly present, while tenotomy must be performed in strabismus from contraction, but where the antagonistic muscle has retained sufficient activity.

No after-treatment is required, except what has been said in regard to the direction of the eye to a certain point, with or without glasses. The patient can walk round, and in a few days the wound is completely healed. The defective refraction, either hypermetropia or myopia, must be corrected or neutralized by the use of the proper spheric glasses.

With the degree of perfection which the modern operations have reached, there is rarely any danger. The unpleasant circumstances which may occur are, first, that the eyeball can be injured, which may produce the most injurious consequences for the sight. It can easily be avoided, by using blunt-pointed scissors in the subconjunctival methods, and sharp-pointed only when operating *à jour*. Another accident, though not so dangerous, can happen while separating the conjunctiva from the capsula till under the caruncula, as in Liebreich's and Snellen's methods. The scissors meet in their way some arterial bloodvessels, and if these should be cut, especially when the capsula

Tenoni is wounded at the same time, a serious extravasation of blood in the cavity of the capsula follows, and as the blood is completely excluded from the air and does not readily coagulate, this extravasation can become very intensive and the eye protrudes considerably. A compressory bandage and rest relieve this trouble without any bad result, but it can be avoided by pressing the points of the scissors forward and not backward, while cutting under the plica semilunaris and the caruncula.

Operation on both eyes is required in alternating strabismus, and sometimes in the high degrees of simple strabismus, when it is proved that one operation is not sufficient.

In conclusion, I would say that in operating for strabismus it must be our chief aim, not only to relieve the deformity, but especially to restore, as much as possible, complete vision.

New Bedford, Nov., 1872.

Clinical Lecture.

CLINICAL LECTURE ON HERNIA.

Delivered at the Boston City Hospital,

By David W. Cheever, M.D. Harv.

The escape of a viscus from its natural cavity is called a hernia. The frequently violent action of the muscular walls which surround the abdomen compresses the viscera, which tend to protrude at the weaker parts, or wherever there are natural openings in the parietes. The possible situations of a hernia are many, but to-day we shall speak of the two most common varieties, namely, those that protrude through one or both of the abdominal rings *(inguinal herniæ)*, and those that escape with the vessels below Poupart's ligament *(femoral herniæ)*. Hernia is an extremely common affection, occurring, according to the statement of some writers, in one person out of every eight; and though others have not concurred in so high an estimate, its frequency has been such as from the earliest times to induce many attempts for its radical cure. The reason for this frequency is an anatomical one, and we can but consider the existence of the abdominal rings as an imperfection, though perhaps a necessary one, in our organization, for which we have to pay the physical penalty. The immediate cause of hernia may be either hereditary, for hernia often seems to follow successive generations; or the abdominal walls may have become weakened by disease or by pregnancy; or, lastly—the usual history in adults—the viscera are forced through the rings by some sudden strain or exertion, and the patient becomes sensible, at the time, of a rupture.

When a hernia protrudes from the abdomen, it pushes before it a pouch of the parietal peritoneum, which is called the *sac*. This sac is distinguished by a neck where it emerges from the rings, a body, and a fundus or dilated extremity. Sometimes the neck is as broad as the fundus, but in the ordinary hernia of adults it is narrow. The whole sac, after a time, becomes thickened and elongated, and is apt to contract adhesions to the neighboring cellular tissue, so that it cannot follow the bowel when the latter is returned to the abdomen *(reducible hernia)*. Sometimes the contents of the sac contract adhesions to it, or they become swollen or engorged, so that they cannot be returned *(irreducible hernia)*. When this state of things exists, and peristaltic action ceases from fæcal stoppage, flatus or other reasons, we have incarcerated hernia, with great danger of inflammation, strangulation, and mortification of the intestine, causing the death of the patient unless relieved by early treatment. Strangulation, also, often occurs suddenly, owing to the nipping of the hernia at its neck by the tendinous surroundings of the rings.

The anatomy of inguinal and femoral herniæ is too often a stumbling block for the student. It is best to study the subject in a special dissection, made regardless of the arteries, and with a clear understanding of the imperfect nomenclature which has given rise to most of the difficulty of understanding and describing hernia. Thus the two pillars of aponeurosis of the external oblique muscle which environ the outer ring, called external and internal, should be called lower and upper. The outer abdominal ring, though outermost with reference to the plane of the abdominal muscles, is innermost with reference to the median line of the body; and the inner abdominal ring, in like manner, is farthest out from the median line.

So, too, oblique inguinal hernia is called external because it passes outside the epigastric artery, although it emerges from the abdomen through the inner ring; and direct inguinal hernia is called internal, because it lies inside the epigastric artery, although it passes directly out of the external abdominal ring.

If possible, a worse confusion occurs in naming the fasciæ concerned in femoral hernia.

Thus, we have the iliac portion of the fascia lata forming Hey's ligament or the outer falciform border of the saphenous opening: and the iliac fascia proper lining the iliacus internus muscle within the pelvis and forming the posterior half of the sheath of the femoral vessels. Also, the transversalis fascia forming, above Poupart's ligament, the posterior wall of the inguinal canal; and below the ligament, by another expansion of the fascia, forming the anterior sheath of the femoral vessels or fascia propria of femoral hernia.

In mapping out the anatomy of the inguinal region, the great landmark is the spine of the pubes. It can always be felt, even in the most unfavorable subject. Into the pubic spine is inserted the lower or outer pillar of the outer ring, and passing across to the symphysis, just above the spine, is the upper or inner pillar of the same opening. Over and a little outside the spine of the pubes the external abdominal ring is inevitably to be found. It may be felt best in the male by placing the finger at the bottom of the scrotum and invaginating it up into the ring. Just above the middle of Poupart's ligament, is the internal abdominal ring. Below Poupart's ligament, and about midway between the outer and inner abdominal ring, is the crural or femoral ring. These relations are constant, and by starting from the pubic spine we can make them all out. In this way, we can distinguish a femoral from an inguinal hernia, even though the former be rolled up into the site of the latter; either by drawing down the tumor and seeing if the neck be below or above Poupart's ligament, or by finding the pubic spine and exploring for the external abdominal ring.

In a dissection with special reference to the study of hernia, on turning back the skin of the groin we expose the external superficial fascia, and should observe the three sets of arteries with their accompanying veins which ramify on the surface of the abdomen, namely, the superficial epigastric, the superficial external pudic, and the circumflex ilii. Beneath the superficial fascia, there is often considerable adipose tissue which should be cut away and deflected with the deep layer of superficial fascia. We then come upon the aponeurosis of the external oblique muscle, and observe in its lower part a rent or fray, which marks the situation of the external abdominal ring. This rent, in elderly persons, sometimes extends nearly up to the ilium. On either side of the ring are those portions of the aponeurosis called the external and internal pillars. They are more or less connected above by the delicate tendinous inter-columnar fibres, which are especially developed in the male, and serve to strengthen the ring. These fibres are prolonged into a fascia which invests the spermatic cord, called the external spermatic fascia. If we reflect the skin and dartos of the scrotum, we shall find this fascia prolonged down over the testis. This, too, is the fascia we try to push up and invaginate in performing Wood's operation for the radical cure of oblique inguinal hernia, which we shall explain later.

If, now, we reflect the external oblique muscle, we expose the internal oblique, and you will observe that a few of its fibres embrace the spermatic cord, forming the cremaster muscle. This muscle is very feeble in adults, and has no apparent function, save that it forms a covering for hernia. In children, it serves to retract the testis, as you may easily observe when they are crying. On removing the two pillars of the ring, we can study the boundaries of the inguinal canal. This canal serves for the passage of the spermatic cord in the male and the round ligament in the female. It extends from the internal to the external abdominal ring, a distance of about an inch and a half. Behind is the fascia transversalis, and lower down a portion of the conjoined tendon of the transversalis and internal oblique muscles. In front, fibres of the internal oblique and transversalis. The floor of the canal is formed by Poupart's ligament, and the roof by the layers of the abdominal wall. The spermatic cord consists of loose cellular tissue, the ducts, the spermatic artery and veins, and also, in certain defective conditions, of a (funicular) process of peritoneum.

If we remove the internal oblique, we expose the thickened transversalis fascia, which is thin and attenuated above, but here is thick and of considerable importance. The internal abdominal ring is situated in this fascia about half an inch above the middle of Poupart's ligament. The spermatic cord, as it passes through the inner ring, receives an investment from the infundibuliform fascia, which is a partial continuation of the transversalis fascia, lined by the funicular process of the peritoneum. The epigastric artery, which ascends to anastomose with the internal mammary, bears an important and constant relation to the two rings, as it always runs between them. Remember, therefore, that this relation can never change; and no matter how much a hernia appears to go back directly through the external ring, if it is an oblique hernia, still the artery is on the inside.

The whole anatomy of oblique inguinal hernia may be summed up in the descent of the testis, and the changes it imposes on the parts through which it passes. The testicle, in the earlier part of the fœtal state, lies just below the kidney, and, like the latter, behind the peritoneum by which it is partially enveloped in front. The gubernaculum, or leading string, which guides it to the scrotum, has developed upon it, according to Mr. Curling, three sets of muscular fibres—one set attached to Poupart's ligament, a second to the pubes, and a third to the scrotum. As the testicle descends along the psoas muscle, the first set direct it to the inner abdominal ring ; the second draw it through the canal, while the third conduct it to the bottom of the scrotum. The testicle passes through these fibres in its descent, and they become involuted on the spermatic cord, forming the loops, extending down from the internal oblique over the cord, and returning to the pubes, under the name of cremaster muscle. But the testicle also pushes before it the peritoneum which overlies it, and thence protruding it in a bag or sac, in its descent through the inguinal canal, carries a double layer before and over it down to the bottom of the scrotum. Here the two layers invest the testis in a double covering, with the serous sac between—the cavity of the tunica vaginalis. Just as in all serous investments, the organ lies behind the membrane ; one layer invests the testis in front, named the *tunica vaginalis testis*, or *propria ;* the other layer adheres to the scrotum, which it lines, under the name of *tunica vaginalis scroti*, or *reflexa*. This may be rather trite anatomy to go over, but a review of it seems necessary for a fair understanding of the subject. When the testicle descends, it leaves an open pouch of peritoneum behind it, which becomes entirely cut off afterwards in the normal state. It is upon certain imperfections in this closure that the varieties of oblique hernia and of hydrocele depend.

When the closure of the pouch of peritoneum takes place between the scrotum and the abdomen, the lower pouch is called the *vaginal* process, the upper the *funicular* process of the peritoneum.

The first variation from the normal state is where the pouch does not close at all, and remains one cavity from the abdomen to the bottom of the scrotum. Through this, the bowel slips down and forms a congenital hernia, lying in contact with the testis.

In the next form, an attempt is made at closure, but is not fully carried out. The common canal becomes occluded at one point near the external ring ; the funicular process shrinks up within the inguinal canal, but the vaginal process remains open up to the external ring. Thus we have all connection with the peritoneum closed ; but the closed cavity of the tunica vaginalis scroti reaching up on the cord as high as the external abdominal ring. If, then, a hernia protrude, it pushes before it its own pouch of peritoneum, and emerging at the outer ring, descends into or behind the large vaginal sac ; and we thus have the anomaly of a rupture covered by two serous sacs instead of one. This is called *encysted* hernia—sometimes infantile hernia, but that is a misnomer.

In the third variety, we have the connection between the scrotum and the common peritoneal cavity completely cut off ; the vaginal process contracted to a normal size around the testis, but the funicular process dilated and patent for a short distance on the cord. Into this dilatation, which extends from the inner ring to a point an inch, more or less, below the outer one, a knuckle of intestine may gradually descend, and thence creep slowly down into the scrotum, where it does not lie in contact with the testis, but, usually, in front of the tunica vaginalis. This is the form of common oblique hernia which comes on slowly and spontaneously at some period between childhood and maturity; not congenital, but so gradual that the patient cannot define its exact period of origin. After reaching the scrotum it is not distinguishable from the other ordinary forms of hernia.

Finally, we have the normal and perfect closure, where the vaginal process is converted into a serous sac around the testis, and the funicular process wholly retracted within the inguinal canal, where it assumes the name of infundibulum process, which envelopes the cord at the inner ring. The remains of the original serous passage shrink into an impervious mass, and, together with the traces of the gubernaculum, envelope the cord in loose, areolar tissue. This, then, is the case in which either oblique or direct hernia occurs from a strain, or rupture, forms its own proper sac of peritoneum, emerges, in either case, at the outer ring, and descends into the scrotum in front of the testis and tunica vaginalis; and the only difference in the covering of the hernia is, that when oblique it is surrounded by the fibres of the cremaster, and when direct it pushes before it the conjoined tendon. Accordingly, when an oblique inguinal hernia proceeds down the spermatic canal it becomes invested first with a covering of peritoneum, then of transversalis fascia, of the cremaster muscle, of intercolumnar fascia, of superficial fascia, and, lastly, of the skin. Behind the region of direct hernia is a triangle formed by the edge of the rectus muscle, the obliterated hypogastric artery and a part of Poupart's ligament. It is called Hesselbach's triangle, after the anatomist who first described it. The contraction of the fœtal hypogastric artery forms, here, two pouches, or fossæ of the peritoneum, one opposite the outer, and one opposite the inner abdominal ring. The relative difference in size and strength of these two pouches determines the occurrence of a direct or an oblique inguinal hernia.

In females, inguinal hernia is rare. If they have any rupture, it is usually of the femoral variety. Occasionally, we see a hernia following the round ligament into the labia majora. On the other hand, femoral herniæ are more frequent in women than in men. This is to be accounted for by the larger size of the female pelvis, the greater spread of the arches, and the greater size of the crural opening. Still we have seen incisions made, on the operating table, in men for inguinal hernia when it turned out to be femoral. The spine of the pubes is the great landmark for the diagnosis of inguinal and femoral hernia. Once having determined the position of that, and found the external ring to be clear, you are sure of having a femoral hernia.

In studying the anatomy of femoral hernia, we remove the skin from the groin as before. We have then before us the familiar Scarpa's triangle, bounded by the sartorius and adductor longus muscles, and at the base by Poupart's ligament. It is divided into two halves by the great vessels of the thigh. The internal saphenous vein is seen passing up the inner side of the thigh through the saphenous opening in the fascia lata to join the femoral vein. Clustering about it are the superficial inguinal glands. That portion of the fascia lata covering the saphenous opening is called, from its perforated appearance, the cribriform fascia. On removing the superficial fascia, we come upon the fascia lata, divided, as we have said, into the pubic and iliac portions. That part of the iliac portion which arches over the saphenous opening, in the form of a crescent, to be inserted into the spine of the pubes, is termed the falciform process, or Hey's ligament. By its projection in front of the pubic portion, it forms the saphenous opening. If, now, this falciform process be deflected, together with the adjoining iliac portion of the fascia, we expose the vessels, enveloped in their femoral sheath, which we can trace as a distinct prolongation of the transversalis fascia of the abdomen. The transversalis fascia passes down in front of the vessels; the iliac fascia (*not* the iliac portion of the fascia lata) passes down behind them. The two fasciæ are united close to the vessels on the iliac side, but on the pubic side there is a small space between them which is called the femoral or crural canal. This canal is closed above by a layer of dense areolar tissue, called the septum crurale. The descent of a femoral hernia is at first vertical, following the crural canal; then it pushes towards the saphenous opening, turning round the sharp, hard falciform process, and emerging in the fatty tissue of the groin. The coverings, as in inguinal hernia, are six in number, viz.: peritoneum, septum crurale, femoral sheath, cribriform fascia, superficial fascia and skin. You will readily perceive why femoral is so much more dangerous than inguinal hernia. The latter falls through a small, soft, yielding passage, easily dilated to accommodate its new tenant; whereas the femoral descends through firm, fibrous walls and turns about the hard, unyielding falciform process, rendering it more liable to strangulation, especially in its earlier periods.

The efforts to cure hernia date back to Ambrose Paré, who first substituted his *punctum aureum* for the horrible process of castration formerly performed for its cure. This *punctum aureum* (golden stitch) is practically the same operation that has been of late years introduced by Mr. Wood, of London. In Mr. Wood's operation, the patient is etherized, the pubes closely shaven, the hernia reduced, and an incision made in the scrotum, over the sack, about an inch and a half in length. The skin is then dissected away from the underlying external spermatic fascia sufficiently to allow the finger to freely invaginate the fascia through the external ring. The finger, after invaginating the fascia, is pushed behind the inner pillar of the ring and the conjoined tendon, and a long Wood's needle, firmly fixed in a handle, is passed upwards along the finger and made to penetrate the tendon and also the skin, which should be well drawn to the median line, in order to have the puncture as far outwards as possible. The spermatic cord and the peritoneum are safely behind the finger and uninjured, unless the hernia be either congenital or irreducible, in which case the peritoneum may be perforated. A silver wire is then passed through the eye of the needle, which is withdrawn, unthreaded, and passed up a second time, but this time perforating the outer pillar, and being made to emerge through the same puncture in the skin. The other end of the wire is then brought down like the first, and the two ends drawn down until the loop above approaches the abdomen. Then one end of the wire is passed through the spermatic fascia, and both ends are twisted together. Traction being made upon the loop above, the twisted ends are drawn upwards, invaginating the spermatic fascia into the canal and making the two pillars of the ring approach each other. The loop is then twisted and fastened over a roll of bandage. The whole hernial canal is thus occluded; the tissues juxtaposed unite, and after ten days the wires become loosened, and can be withdrawn. A horse-shoe pad truss is then to be worn for about six months, and the patient, not unfrequently, is permanently cured.

It cannot be denied, however, that Mr. Wood's success in this operation is much greater than that of many other gentlemen who have tried it. In Boston, the percentage has been much inferior to his. Too often, after a few weeks, or months, the lymph which unites the invaginated tissues becomes absorbed, or so weakened as to allow some simple accident to reproduce the hernia. Lately, since the introduction of the carbolized catgut ligatures, the operation has been revived in this neighborhood, and you will find published in the last year's Boston Medical and Surgical Journal* an account of several successful cases by Dr. Marcy, of Cambridge. These sutures are cut short off, after tying them, and are left in permanently. The sutures consist of small strings of catgut soaked for many weeks in a solution of carbolic acid and olive oil. The difficulty is, that when soaked for too long a time, the sutures become rotten. We propose, to-day, to perform Wood's operation, substituting carbolized sutures for the silver wire. The patient is young, healthy and strong; and is willing to try anything to be relieved of his one infirmity. The risk of the operation is small. The prognosis as to radical cure is quite good in children from six to twelve years of age. It is well to wait until after the first dentition, as they can then exercise some discretion, and refrain from violent exertion after the operation. Adults, if not cured, may have their condition improved. Those suffering from a hernia, which, though reducible, requires a supporting apparatus (not a truss), are often much benefited.

[The operation was then successfully performed. The hernia was a small and recent one, of the oblique inguinal variety.

Two stitches were taken in each pillar, and the spermatic fascia invaginated. The catgut was cut short off, and the knots, which had completely puckered the inguinal canal, fell back out of sight. A spica bandage was applied.

Four days after the operation, there existed a moderate orchitis from the tightness of the cord. On the day following the operation, there was some colic. Subsequently, a rather profuse suppuration came on, which gradually subsided. When the patient left the hospital, six weeks after the operation, the wounds were closed—there had been nothing seen of the stitches, and the hernia remained up.]

ATROPIA IN NIGHT-SWEATS.—Dr. J. C. Wilson, in the Philadelphia *Medical Times*, calls attention to the efficacy of atropia in arresting the night-sweats of phthisis, in doses of one-sixtieth of a grain once or twice a day. It was promptly successful after the failure of sulphuric acid, tannic acid, oxide of zinc, and other remedies. Dr. Sidney Ringer also furnishes similar testimony in the *Practitioner*, he having injected it in the skin in doses of the hundredth part of a grain. Dryness of the fauces and dilatation of the pupils result from a continuance of the treatment.—*Pacific Med. Journal.*

PLASTER FOR THE RELIEF OF OBSTINATE VOMITING.—M. Gueneau de Mussey recommends the following plaster in cases of obstinate vomiting which are not relieved by the usual internal remedies. It is to be applied to the epigastrium:—Theriaca, 2 parts; diachylon, 2 parts; extract of belladonna, 1 part.

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* Vol. viii., page 315.

Progress in Medicine.

REPORT ON MIDWIFERY AND GYNÆCOLOGY.

By W. L. Richardson, M.D.

(Concluded from page 166.)

Gynæcology.

Internal and External Orifices of the Uterus.—As early as 1848, Dr. J. H. Bennet called the attention of the medical profession to the existence of a regular sphincter separating the cavity of the uterus from that of the cervix. At the last annual meeting of the British Medical Association, Dr. Bennet read before the Midwifery Section a paper (*British Med. Jour.*, Sept. 21, 1872) in which he entered into an elaborate account of the anatomy, physiology and pathology of the internal and external uterine orifices. The views entertained by the writer may be thus briefly stated:—

Anatomically, there are two distinct cavities in the uterus, that of the body, which is the larger one, and that of the cervix, which is the smaller. Conception and development of the fœtus takes place within the cavity of the body, whilst the cavity of the cervix is a species of ante-chamber, preceding and protecting the internal chamber. The circular fibres of the body of the uterus converge towards the cervix, are continued through its entire length, and form the greater part of its tissue. These circular cervical fibres are endowed with vitality and contractility, even in the non-pregnant state, as can be easily demonstrated by introducing a stick of nitrate of silver into the cervical cavity. These circular fibres, in the healthy uterus, surround and form an infundibuliform cavity in the central cervical region; whilst at the outer or vaginal outlet, and also where the cervix passes into the uterine cavity, they are in circular approximation, like the sphincter ani.

As a rule, these uterine orifices are closed; and many operators, failing to recognize this physiological condition, have proceeded to a division of either the internal or external os, ascribing to what they have considered an abnormal condition all sorts of uterine suffering.

Division of the *os internum* should be resorted to only in cases of severe congenital dysmenorrhœa or pseudo-membranous dysmenorrhœa. In the former class of cases, the operation is justifiable when there is no other apparent cause for the dysmenorrhœa than an evident narrowing of the uterine passages; in the latter when there is clearly not a sufficiently free exit for the pseudo-membranes. It may also be allowed in all pathological cases when the removal of the morbid condition is not followed by a spontaneous dilatation of the really narrowed orifice and a subsequent disappearance of the accompanying dysmenorrhœa.

Division of the *os externum* should be limited to those rare cases of conoid cervix in nulliparous women in which the orifice of the os internum is unusually small.

In no case should the *os uteri internum* be divided if a small, wax bougie, warmed and bent to the natural anterior curve of the uterus, will pass on gentle continued pressure into the uterine cavity. Nor even in those cases in which the bougie thus used cannot be passed if there is no dysmenorrhœa, for it is probable that in such cases the contraction may relax physiologically at proper times and thus no operation be required.

The *os externum* should never be divided if a good-sized wax bougie can be passed easily into the cervical canal.

In these days of heroic surgical treatment of dysmenorrhœa, Dr. Bennet's paper comes with peculiar force. Dr. Simpson, who, in 1843, first advocated this operation, was accustomed, in all cases of dysmenorrhœa depending on a contraction of the os or cervix, to divide the cervix uteri. Hæmorrhage, sometimes to an alarming extent, inflammation, at first local but soon spreading to the surrounding loose cellular tissue or even to the pelvic peritoneum, are the dangers which are liable to follow a method of treatment which has certainly come to be made too much a matter of hasty adoption instead of being kept as a last resort. Dilatation by means of sponge or sea-tangle tents should certainly be first attempted. In order for the operation to be successful, both the os internum and externum must be dilated, though some writers, following the lead of Marion Sims, have taken the ground that a dilatation of the os externum is, as a rule, all that is necessary.

Dr. J. Matthews Duncan (*Edin. Med. Jour.*, May, 1872; *Brit. Med. Jour.*, Jan. 25, 1873), prefers, to sponge-tents, a graduated series of metallic bougies, care being taken not to allow them to remain in the uterus above a few minutes at a time.

Intermenstrual or Immediate Dysmenorrhœa.—In a paper recently read before the Royal Medical and Chirurgical Society of London *(Brit. Med. Jour.*, Oct. 19, 1872), Dr. Wm. O. Priestly gives the account of four cases, in all of which the prominent feature was the occurrence of severe pain in the inter-menstrual period, the pain bearing a definite relation to the occurrence of the catamenial flow. Dr. Priestly suggests the following as a possible explanation of these cases. "The commencement of the monthly discharge is coincident with the maturation of one or more ovules in the ovaries. Towards the end of the menstrual interval, a considerable amount of turgescence takes place in one or both ovaries, and a distinct prominence at one point indicates the approaching dehiscence of the ovisac. This turgescence further continues throughout the menstrual period, lasts for a few days after its cessation, and then the vascular excitement subsides, leaving the organ for a limited time in comparative quiescence. There can be no doubt that follicles in various stages of maturity are present at this time in the stroma of the ovary, but at what date, in relation to menstruation, those, which are to take part in the next period, begin to show special activity, or how early they approach the indusium of the ovary, with the object of passing through its structures, has not been ascertained. It is not unreasonable to suppose that the preparation for an approaching period may commence in the ovary as early as ten or fourteen days before the period becomes due. Under normal conditions, this commencement of a series of new ovular changes is not attended by any appreciable signs, but it may readily be surmised how special irritability or disease in the ovary may make this early stage as difficult and painful as the later ones, which are associated with the common forms of dysmenorrhœa. Hypertrophy of the substance of the ovary, or thickening of its coverings, will so interfere with the necessary physiological changes as to produce undue hyperæmia; or, perhaps, oppose resistance to the passage of the ova towards the peritoneal surface, and so give pain. The obstacles being finally overcome, and the follicles having bored their way to the free surface of the ovary, the tension is relaxed, and hence the subsidence of pain before the appearance of the catamenia. Even without any very noticeable structural change, the mere performance of function at its commencement may produce suffering, the pain in these cases partaking of a neuralgic character. The reason why there is immunity from pain during some of the menstrual intervals, probably is that the other ovary is performing duty at these times, leaving the side affected at rest for one or more consecutive months."

The treatment in these cases must vary with the local condition. In cases of hypertrophy, or enlargement from any cause, or where the ovary is bound down by inflammatory exudation and its coverings thickened, occasional local depletion, a course of perchloride of mercury with bark, or the preparations of iodine and bromine may be useful, aided by a Kreuznach bath. Where there is an absence of organic changes, and the case assumes rather the aspects of a neuralgic affection, the preparations of iron, quinine, zinc and arsenic, aided, in appropriate cases, by chalybeate baths, afford most promise of effecting a cure.

Uterine Cancer.—For the successful treatment of malignant disease of the uterus, early diagnosis of the true condition of the patient is clearly important. Even in these cases the prognosis can scarcely be considered doubtful, although many cases are on record in which epithelioma has attacked the vaginal portion of the uterus and an immediate ablation of the diseased tissue seems to have afforded great temporary if not permanent relief.

For the diagnosis of uterine cancer in its earlier stages, Prof. Otto Spiegelberg (Breslau) relies—1st, on the peculiar hardness of the cervix; 2d, on the condition of the covering of the mucous membrane; and, 3d, on the reaction which follows the use of sponge-tents. He calls the attention of the profession (*Arch. f. Gynækol.* iii. 2, 1872) to the characteristic hardness and unyielding nature of the cancerous deposition when compared with diffuse or circumscribed hyperplasia, the so-called simple or benign induration. He alludes to the fact that the mucous membrane, covering the cervix uteri, is always immobile in cancerous degeneration and is found firmly bound down to the underlying tissue, whilst in hyperplastic thickening and induration this is not the case. Moreover, in introducing a sponge-tent, it will be noticed that the tissues dilate regularly in cases of simple hyperplasia, and become looser, softer and thinner, while in cancer they remain unchanged, rigid, inflexible, not in the slightest perceptible degree being stretched by the swelling of the tent.

As regards treatment, there are several methods recommended. The three ends to be kept constantly in view are the preservation of life, the prolongation of life, and, lastly, the alleviation of pain. As regards the preservation of life, but little can be hoped, but as regards its prolongation and the alleviation of suffering, much can be done by a removal of the diseased tissue, by which a striking relief from pain and the profuse hæmorrhagic and leucorrhœal discharges which usually accompany uterine cancer is at once experienced.

In an elaborate paper on this subject (*Brit. Med. Jour.* Oct. 19, 1872), read at the last annual meeting of the British Medical Association, Dr. Alex. R. Simpson advises an operation, not only when we have to deal with a cauliflower excrescence, or with a mushroom-like epithelioma of the os uteri, the cervix being healthy, but also in encephaloid cases where there is a projecting fungating mass with a hyperæmic surface, and even in scirrhus and other varieties which present an excavated surface, the ulceration not having yet perforated the uterine and vaginal walls. In reference to the hæmorrhage which is reported as liable to follow any attempt to remove the diseased structure, Dr. Simpson claims that the bleeding is in these cases from the vascular surface, and that the hæmorrhage during an operation becomes less and less as a more healthy tissue is reached. Nor is the disease at all aggravated by surgical interference; on the contrary, the more thoroughly the diseased tissue is removed the longer is it in returning; and, even when it returns, its progress is not more rapid than when it is left to itself. The leucorrhœal discharge is also arrested, for a time, at least, by a removal of the diseased tissue.

To effect the removal of the cancerous structure, Dr. Simpson advises either the galvano-cautery or the wire écraseur for the softer tissues and the chain écraseur of Chassaignac for cervical amputations. In those cases where the disease is more sessile, having a broad base and extending deeply into the uterine substance, he advises that it be dug out either by the finger-nail or the curette of Recamier.

Dr. Paul Munde (New York), formerly assistant to Prof. Scanzoni at Würzburg, has recently published (*American Jour. Obstet.*, Aug., 1872) the account of twenty-three cases of cancer of the uterus treated by what he calls the scraping process. Sixteen of these cases occurred in the practice of Prof. Simon, of Heidelberg, and three were operated upon by Dr. Munde himself. In all of these cases, although a radical cure was not effected, yet a very marked improvement followed the operation. In one case the scraping gave rise to a slight circumscribed peritonitis, which disappeared, however, within a fortnight; while in a second case a severe attack of peritonitis ensued, during which the uterus sloughed away, Dr. Munde having an opportunity to examine the necrotic uterus. In this case, the patient recovered from the peritonitis, but the cancer, though held in check for a time, soon began to progress, as the surrounding parts were too much involved before the operation to hope for more than a temporary improvement. Dr. Munde closes his valuable paper by recommending the use of the scoop in all cases where there are loose, cancerous granulations, fungoid excrescences, or the proliferant papillæ of vegetating epithelioma, from which an exhausting hæmorrhage and discharge come, provided always that the cancerous deposits have proceeded so far into the normal tissue as to be beyond the control of the knife or caustics. The operation which he advises is performed by means of oval steel spoons, or scoops with moderately sharp edges and slender stems, having a slight sigmoid curve. By means of these the diseased portions can be easily and effectually removed without the danger being incurred of injuring the peritoneum or pelvic vessels, as is liable to follow the use of the knife or écraseur; nor is there the same probability of a subsequent metritis or pelvic cellulitis as is liable to succeed the use of strong caustics. As a subsequent treatment, injections of cold water or solutions of chromic, carbolic or pyroligneous acid may be used. Prof. Simon uses only a cold water injection, while Dr. Simpson advises (*Brit. Med. Jour.*, Oct. 19, 1872) the immediate application of some powerful astringent, as a saturated solution of the perchloride of iron in glycerine or the powdered persulphate of iron. Latterly, he has made use of a saturated solution of chlorate of potash, applied on pledgets of cotton-wool to the cancerous surfaces, after the plan proposed by the younger Fabbri (Bologna), who has reported a case in which a cancroid disease of the cervix was thus kept in abeyance for nearly three years.

In those cases in which there is much hæmorrhage, or the vaginal discharges are very copious and offensive, Dr. A. Wiltshire (London) advises (*Brit. Med. Jour.*, Nov. 2, 1872) that chromic acid in aqueous solution (ʒss.–℥i.) be applied directly to the diseased surface. As a vaginal injection to be used subsequently the strength of the solution should not be greater than a drachm of the acid to ten or twenty ounces of water.

Chronic Inversion of the Uterus.—For the reduction of chronic cases of this displacement Dr. J. B. Hicks (London) recommends the following treatment (*Brit. Med. Jour.*, Aug. 31, 1872): The instruments to be used are a ring-shaped air bag, about four inches in external diameter and an opening about two inches; a globular air-bag of not too firm walls and larger than likely to be wanted, about four inches in diameter; a vulcanite stethoscope, having a pear-shaped, elastic bag drawn over the thoracic end and tied tightly around the stem. Into the opening at the aural end a stop-cock can be screwed, which is attached to the tube of an India-rubber spraying apparatus, by which means the bag at the other end can be distended.

The method of using these is as follows: The bowels having been opened, the ring-pessary is passed over the inverted uterus and then inflated by its tube, which is then tied. The globular ball is introduced and inflated. A T-bandage with a large perineal pad is applied as tightly as can be borne. Twenty-four hours later, these are to be removed, and the vagina washed out with a warm solution of permanganate of potash. The bags are again introduced, the next day removed and the ablutions repeated. By means of these appliances the vagina is dilated and along with it the os and cervix. At this stage, in some cases, an examination will show that a reduction has been effected. If not, the thoracic end of the stethoscope must be pressed against the fundus as much as possible in coincidence with the axis of the organ. A pad is to be placed on the aural end without the vagina and then secured by a T-bandage. This arrangement is to be removed in twenty-four hours. If the restoration has been accomplished, the end of the stethoscope will have entered the uterine cavity. To secure the complete restoration of every portion the ball on the thoracic end is to be inflated by the India-rubber spraying apparatus. Two or three hours more will complete the restoration. A dose of opium should be given every eight or twelve hours to lessen the irritability of the uterus. In case one day's pressure is not sufficient, it is well to allow an interval of half an hour before re-applying the stethoscope, which should be kept in position another twenty-four hours.

Uterine Paraplegia.—It is a well known fact that, in certain uterine affections, paraplegia is found as an accompanying symptom. The usual explanation of this condition has been to consider the paralysis as due to reflex action. M. Peter maintains (*Gaz. des Hôp.*, Jan., 1872) that such an explanation does not explain why paraplegia occurs in certain cases of uterine disease while nothing of the sort is seen in other apparently precisely similar cases. Pressure exerted by tumors or inflammatory products on the nerve branches in the pelvic cavity cannot produce it, since such pressure on the nerves would also produce pain, a symptom which is generally absent in these cases. He claims that the constitutional tendency of the patient is always at the bottom of these cases, and that paraplegia is only found when some uterine derangement occurs in a patient previously predisposed to nervous affections, either by their own previous state of health or hereditary tendency. A general constitutional treatment is therefore to be adopted.

Fibroid Degeneration of the Uterus.—In an elaborate article (*Brit. Med. Jour.*, Dec. 28th, 1872) readbefore the Midwifery Section of the British Medical Association at its last annual meeting, Dr. Protheroe Smith considered a fibroid degeneration the most common of all the morbid affections to which the uterus is liable. The fibroids of the uterine tissue present great varieties of situation, form, and relation to adjacent organs, and consequently the attendant physical signs and symptoms are proportionately manifold. The disease is found intimately associated, and sometimes, as it were, intermingled with the normal contractile tissue. While thus intercurrent with the contractile fibre-cells, the attendant symptoms, both local and general, may be explained by the irritation which is created, inducing a constant though generally ineffective effort on the part of the uterine contractile fibres to expel the offending matter. When such an effort is successful, the mass is either projected into the uterine cavity, covered only by the lining membrane, and thus becomes polypoid, being then easily removed by ligature, écraseur or scissors; or, if thrust through the contractile tissue, it is expelled outwardly, or, if formed by deposit in the cellular tissue directly beneath the peritoneum, it becomes a subperitoneal fibroid, where it annoys by the effect of its bulk and weight on adjacent organs; in these cases it can only be removed, if pedunculated, by an abdominal section, or, when implicating the uterine structure, by the extirpation of the whole of the uterus and appendages, an operation justifiable only in extreme cases. When the disease is distinct from the normal structure, but sessile in form, it may often be successfully treated by incising and dilating the cervix, and enucleating the mass by removing it piecemeal with ligature or écraseur, &c.

As regards the treatment of fibroid tumors of the uterus, M. Gueniot claims (*Union Méd.*, March, 1872) that the numerous cases on record of the spontaneous absorption of this class of tumors enable us to consider the fact as definitely proved. Their gradual disappearance is effected by a process of fatty degeneration. Remedies, therefore, which are known to favor fatty changes, such as arsenic, phosphoric acid, &c., are especially indicated.

Prof. Hildebrandt (Königsberg) has called attention (*Berlin. Klin. Wochenschrift*, 25) to the great advantage which he has derived in the treatment of such tumors from the use of subcutaneous injections of ergotin. The solution used was made up of three parts of ergotin to seven parts each of distilled water and glycerine. The injections were thrown daily, by means of a Pravaz syringe, into the cellular tissue of the abdominal walls. To show the result of the treatment, Professor Hildebrandt gives the details of eight cases of uterine fibroma, seven of which underwent marked improvement, both as regards the size of the tumor and the accompanying menorrhagia and pain. In one case the treatment was discontinued, owing to its producing symptoms of ergotin poisoning.

Exactly how the ergotin acts, is not, of course, clearly known. Probably it produces a contraction of the nutrient vessels of the tumor; and, also, owing to its contractile action on the uterine walls, a general compression of the tumor is effected, by which the nutrition of the tumor becomes defective, and, as a natural consequence, its subsequent degeneration and absorption ensue. Prof. Hildebrandt considers that intra-uterine tumors will be found, after further investigations, to be more amenable to this method of treatment than sub-peritoneal, and myomata more so than fibromata. In making the injections, he noticed that at the time of menstruation, as well as shortly before and after, a slight hæmorrhage followed the punctures.

As regards the treatment of imbedded uterine fibroids, Dr. J. Whiteford (Grenock) reports (*Glasgow Med. Jour.*, May, 1872) a case successfully treated in accordance with a plan suggested by Dr. J. M. Duncan. The operation consists in simply dividing with a knife by a crucial incision the capsule of the tumor. The operation sets free the tumor which is gradually enucleated by contractions of the uterus, and is finally expelled as the fœtus is in cases of abortion. In the case reported, the hæmorrhage, which had been a constant symptom of the disease, ceased immediately after the incision was made. Six months later, regular labor pains came on and the tumor was expelled. During the six months intervening between the incision and the expulsion of the tumor there was a serous oozing, but no other discharge. The tumor was not putrescent when expelled. The patient made a good recovery.*

SIMON ON THE MANUAL RECTAL PALPATION OF THE PELVIS AND ABDOMINAL ORGANS.—Dr. Gustav Simon (in *Göschen's Deutscher Klinik*, No. 46, 1872, as also in *Arch. für Klin. Chir.*, vol. xv.) describes his method of exploring the pelvis. The patient is placed on the back, either in the lithotomy or ordinary obstetric position; chloroform to complete insensibility is given; and then first two, and subsequently three and four fingers, are passed gradually in by a rotary movement. Bimanual manipulation is enjoined, the other hand being pressed over the abdomen. Tearing of the sphincter seldom occurs if care be taken, and the operator's hand be not too large; some temporary, but no permanent inconvenience may follow.

The examination is useful for all cases of disease of the pelvic organs, especially the uterus, ovaries, and broad ligaments, and of the bladder (in men), as also for tumors in the lower half of the abdomen. In midwifery, it is likely to prove very useful. The first cases examined were: vaginal fistula, cancer, ovarian tumor, and fibro-myoma of the uterus. No incontinence whatever ensued, the explorations being repeated three to five times.—*The London Medical Record.*

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* Writers of papers on Midwifery and Gynæcology will contribute much assistance in the preparation of these reports if they will forward copies of their papers, addressed to this OURNAL.—EDS.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, FEBRUARY 20, 1873.

THE suit brought by certain homœopathic physicians against the Massachusetts Medical Society to prevent their expulsion from the Society, has been dismissed by the Supreme Court. The proceedings in the Medical Society originated in a resolution of that Society, passed at the annual meeting in June, 1871, in these words:—

> *Resolved*, That if any Fellow of the Massachusetts Medical Society shall be, or shall become, a member of any society which adopts as its principle in the treatment of disease any exclusive theory or dogma (as, for example, those specified in Art. I. of the By-Laws of this Society), or himself shall practise, or profess to practise, or shall aid or abet any person or persons practising, or professing to practise, according to any such theory or dogma, he shall be deemed to have violated the By-Laws of the Massachusetts Medical Society, by conduct unbecoming and unworthy an honorable physician and member of this Society.—BY-LAWS, VII.

It was further resolved that a committee be appointed to carry out this resolve, and a committe was appointed, who brought charges against certain well-known homœopathic physicians of Boston, in accordance with the terms of the resolve. The substance of the charges was, that the parties charged were guilty of conduct unbecoming an honorable physician and member of the Massachusetts Medical Society, in that they practised, or professed to practise, medicine in accordance with an exclusive theory or dogma, and of attempting to disorganize the Society by joining another society whose purpose is at variance with, and tends to disorganize, the former.

A board of trial was appointed, in accordance with the By-Laws of the Society, and the trial began in November, 1871, but was interrupted by an injunction issued by one of the Judges of the Supreme Court upon a bill in equity, brought by the physicians upon trial, in which they alleged that the proceedings against them in the tribunals of the Society were illegal; that the Society could not lawfully expel them; and prayed that the Society and board of trial might be enjoined against proceeding further in the matter. No attempt was made to obtain the dissolution of the temporary injunction, as it was thought best to wait for the decision of the full court before going on with the trial. The board of trial adjourned from time to time while the case was before the court, and in November last the case was argued. It has now been decided, and that decision is that the trial and expulsion of members is a subject within the jurisdiction of the Medical Society, and that the Supreme Court cannot interfere by injunction with the exercise of that jurisdiction on account of alleged errors in the proceedings. The result is that the matter is remitted to the tribunal of the Society, where the trial will probably proceed, on the 29th of April next, pursuant to adjournment.

CONSULTATION WITH HOMŒOPATHS.—The *British Medical Journal*, Oct. 26, 1872, contains the following, suggested by a recent article in a medical contemporary on the same subject:—

"A physician practises medicine, not for the sake of solving puzzles, but of saving patients. If a child come to a man to sharpen a knife, in order that he may cut himself, it is his right and duty to refuse, even though it be part of his ordinary business to sharpen knives for legitimate purposes. If a diseased person, who, in his ignorance, submits himself to the homœopathic delusion, find the wit of his homœopathist obviously dull on the nature of the disease, and desire a physician to sharpen it, in order that the homœopathist may with the greater ease of mind practise upon the patient with globules, the physician obviously may and ought to decline to be a party to any such mischief. The physician who consents to 'diagnose' a disease for a homœopathist, becomes a party either to a folly or to a fraud. It weighs nothing, in the decision, that the patient, in his ignorance, is willing to be defrauded or befooled. He is free to make such a choice: we are not free to assist him in it. A physician is only called upon to exercise his calling when his conscience approves it. *Toujours prêt* is an excellent motto for a cabman. When duty calls, and as conscience bids, is the rule for medical workers. It is an individual harm to each patient that he should submit to the delusion, and we are called upon to have no part in it. It is a general injury, and tends to propagate the error that homœopathists have any claim to scientific consideration or footing of professional respectability (we mean always scientifically, and not personally or socially) that a physician should consent to do anything which could bear the semblance of a consultation with a homœopathist, or a recognition of any claim on his part to be a rational therapeutist, or to possess any claim to rank or associate with healers and physicians. Homœopathy, which began as a delusion, is now rapidly ending as a fraud. The ignorant delusion that all diseases were varieties of the itch, which was a cardinal point of homœopathic belief at the outset, has faded before the discovery of the itch-insect. The mystic folly of extreme dilutions, the potency of increasing weaknesses, the value of direction in shaking and stirring, are fading follies, likewise; their place is being taken by frauds. We hear now of castor-oil and hydrate of chloral, tincture of aconite and tartar emetic, in heroic and almost poisonous doses, to produce purgation, give sleep, reduce the heart's action, and promote secretion. It no more becomes us to assent to a fraud than to yield to a delusion; and now more than ever, perhaps, must it be held disgraceful for a physician to hold any direct or indirect intercourse with a homœopathist, whether 'hard-shelled' or 'soft-shelled,' globulist or trimmer."

FOUNDLINGS AND FOUNDLING INSTITUTIONS.—In the *Medical Record* for Nov. 15th ult., we find an elaborate and exhaustive paper by Dr. Abraham Jacobi, presented in behalf of a committee appointed by the

New York State Medical Society to investigate and report upon the following subjects:—

1. The causes of the fearful mortality of abandoned infants in general, and those in large public institutions in particular.

2. The reasons for the giving up of large institutions, and the success of the dispersing system for abandoned infants, in every country of Europe, where the preservation of lives was an object.

3. The causes of the unusually large infant mortality in the institutions in charge of either public or self-constituted authorities in New York City and State.

4. The plans and means for improving the condition of foundlings and abandoned children in New York City and State—

a. During their infancy, when they are most subject to disease and death.

b. During childhood and adolescence, when they require an education sufficient to make them useful members, and prevent them from becoming enemies of and dangerous to society.

The conclusions at which the writer arrives and the recommendations in accordance therewith are as follows:—

That the life and health of every infant is, both economically and morally, of paramount importance to society and to the commonwealth:

That it is the duty of society and of the State to grant every infant the possibility of living and obtaining an education:

That it can, under no circumstances, free itself of its responsibilities by throwing them upon private individuals; but should take charge of every infant deprived of its parental protectors by death or incompetency:

That science and experience have united on certain principles to be observed in the raising of the young:

That human breast-milk is more appropriate than artificial food; the country more wholesome than a large city; and an inferior private dwelling better adapted than a large, over-crowded institution, to the raising of an infant:

That the practice of uniting lying-in asylums with infant asylums or hospitals is a direct source of dangerous disease and fearful mortality:

That the accumulation of many infants under one roof, under the best possible circumstances, and with as gentle care as is observed in New York State and city, is conducive to ill health and unavoidable mortality; this system having been given up in Europe for this very reason:

That, according to the statistics of our own large infant asylums, their infant mortality is immense, and equal to the mortality of the large foundling hospitals of Europe before a radical change in their system of management was instituted:

That the necessity of distributing abandoned infants among private families, especially in the country, is urgent:

That the Medical Society of this State recommend such a change in the manner of caring for abandoned infants:

That the State should see that this change be made as speedily and fully as possible, by all the public and self-constituted authorities concerned in the care of foundlings; inasmuch as it has positive responsibilities towards every member of society in general and the young and feeble in particular:

That, however, the State should not interfere with private charity towards foundlings, so long as the interests of the infants and the Commonwealth are not injured:

That the State ought not to be held responsible for expenditures not incurred by itself nor under its own control; that private charitable societies should not assume duties beyond their own means; and, in particular, that, while private charity and enterprise must be encouraged, private ambition and officiousness must not be indulged in at the expense of the taxpayers:

That, therefore, when private individuals or corporations ask the Commonwealth for permission to administer charity on a large scale, under the rules and regulations of a charter, this permission and charter does not involve that the State should be tributary to such individuals or corporations:

That, as medical men and citizens of the republic, we are of the opinion that the maintenance of large institutions for the care of foundlings, by the payment to them by the State of eight dollars per head per month, is not productive of good results:

That the probability, or possibility, of frequent changes in the administration of such institutions, which are, moreover, liable to be placed under the charge of persons whose qualifications for the solution of questions of the greatest difficulty and importance is frequently doubtful, is a source of great danger to both the infants and to the Commonwealth:

That the supervision and control of all the abandoned infants of the State belongs alone to the State; no matter whether they are sustained by the State, or by private individuals or corporations:

That we see in such supervision and control no unrepublican centralization, but the performance of a duty of the Commonwealth towards the feeble and dependent young.

COLDS—STOP THEM.—Dr. Dobell, in his recent work on winter cough, says, in emphatic italics, "*colds can be stopped without lying in bed, staying at home, or in any way interfering with business.*" He says that his plan, if "begun directly the first signs of catarrh show themselves in the nose, eyes, throat or chest, . . . is almost infallible," but "will not answer if the cold has become thoroughly established."

"The plan is as follows:—

"1. Give five grains of sesquicarbonate of ammonia, and five minims of liquor morphiæ in an ounce of almond emulsion every three hours. 2. At night, give ʒiss. of liquor ammoniæ acetatis in a tumbler of cold water, after the patient has got into bed and been covered up with several extra blankets; cold water to be drunk freely during the night should the patient be thirsty. 3. In the morning, the extra blankets should be removed so as to allow the skin to cool down before getting up. 4. Let him get up as usual, and take his usual diet, but continue the ammonia and morphia mixture every four hours. 5. At bed-time, the second night, give a colocynth pill. No more than twelve doses of the mixture from first to last need be taken, as a rule; but should the catarrh seem disposed to come back after leaving off the medicine for a day, another six doses may be taken and another pill. During the treatment the patient should live a little better than usual, and on leaving it off should take an extra glass of wine for a day or two."

Dr. Dobell says his patients call this the "magic mixture."

Correspondence.

Messrs. Editors.—At a meeting of the Middlesex East District Medical Society, held at Woburn, Jan. 15, 1873, the special committee appointed by the President, composed of Drs. Cutter, Chapin and Clough, upon Resolutions on the death of Dr. Edward Gage, reported the following, which were unanimously adopted :—

Whereas, Edward Gage, M.D., late of Paris, has been removed by death, we, his associates, members of the Middlesex East District Medical Society, at our first regular meeting after his decease, cordially unite in the following expressions, and it is [illegible],

Resolved, That we hereby express our recognition of his distinguished professional character and our appreciation of his loss ; that we regard with admiration those remarkable traits of character which gave him the genius to aspire to, and the ability to fill, a high position in the practice of a difficult and honorable department of surgery alongside of the trained skill of a city long known as one of the great centres of medical learning and mechanics.

Resolved, That to the genial manners of a perfect gentleman, Dr. Gage added a brain power, a mechanical dexterity and a fidelity of execution that won him a high place in the esteem and affections of a select clientelage ; that he ever inculcated a high estimate of the dignity and nobility of the medical profession, honoring it by work that has stood the severe tests of foreign criticism, thus leaving us an example which incites us to renewed fidelity in the discharge of our varied duties to suffering humanity.

Resolved, That we appreciate the encouragement he gave to this organization by his presence and munificent entertainments, and the generous hospitality he so freely dispensed in his adopted home, ministering to the wants and desires of those (especially of our number) who chanced to visit Europe.

Resolved, That though his last days were clouded with disease, still we look through the cloud and remember him only as when in full health and vigor he adorned his profession and manifested those qualities of head and heart that stamped him a man of mark and worth.

Resolved, That our secretary enter these expressions upon our records, communicate them to the family of the deceased, and publish them in the *Middlesex Journal*, the Boston Medical and Surgical Journal, and the *Dental Cosmos.*

Azel Ames, Jr. M.D.,
Secretary.

Case of Bubo.

Messrs. Editors.—July 3, 1872, I was called to attend T., a young man 25 years of age, married, of sedentary habits, who complained of a swelling in the right groin. Examination revealed an enlargement of one of the glands, of the size of a common marble, very painful on pressure, and situated midway between the anterior superior spinous process and the pubes, and over Poupart's ligament. There was no redness; there was pain, heat and swelling. Ordered ice to be applied to the parts, to be used constantly until relief. Could discover no evidences of former venereal disease, and accepted T.'s statement as true, that he had never had anything of the kind. The bubo continued to enlarge for three weeks, and there was such constant and excruciating pain that the patient was unable to walk, and was necessarily absent from his place of business for more than two weeks. In the interim, rest, absolute quiet, and the recumbent position were recommended, and various applications were made.

I learned that the patient, because of sickness in the house, had lost much sleep, had overworked himself by watching ; in short, he was "run down" completely.

Finally, I recommended a change of scene, harbor excursions, generous diet, ale, porter wine, a tablespoonful of cod-liver oil three times daily, and gr. v. potass. iodid. twice a day.

Up to this time (about Aug. 1) there had been constant pain, the bubo continued hard and firm, painful on pressure, with no indication of suppuration. Its size was now as large as a hen's egg.

Eight weeks after the inception of the disease, suppuration set in, and, the patient objecting to the use of the lancet, this process was allowed to continue, and in three days it "broke" and discharged a small quantity of thin, yellowish pus. But a small part of the bubo was at this time involved.

To-day (January 4, 1873), six months from the inception, four distinct orifices can be seen on the surface of the bubo, at each of which places is discharged daily, in minute quantities, a thin, almost colorless, gelatinous fluid. Bubo as large as a walnut. Little pain on pressure. General health otherwise very good indeed. There had been no injury to the feet. The individual never led what is commonly called a "fast" life, and used no alcohol.

Could this case have been benefited by the injection into the bubo of stimulating fluids?

I am a loss to know how to *cure* such cases as these. This would yield to no plan of treatment that I could adopt, and there are no indications that the discharge will cease. Cannot some expert give the profession more "light" on this important topic? VERNON O. TAYLOR, M.D. Harv.

Athol, Mass.

TO PRESERVE VACCINE CRUSTS.

MESSRS. EDITORS,—The following method was, some years since described by a writer, whose name I do not recollect. In January, 1870, I put up some crusts in this way, and after keeping them in my office exposed to the excessive heat of the summers since then, in September last, two years and eight months afterwards, successfully vaccinated with one. I think its virtues were somewhat impaired, however, for the proportion of successes in the few cases in which it was used was less than usual.

"Put the scabs, wrapped in paper or tin-foil, into a vial filled with freshly burnt alum and seal it."

In this connection, I would like to call attention to the settling of the question of the relative value of long humanized and kine virus.

A large proportion—Wood says one half—of those not re-vaccinated within seven or ten years, are liable, on exposure, to varioloid. Three fifths or more of the re-vaccinations in the Prussian Army are successful. In my own and my immediate neighbors' practice, so far as I have inquired, the proportion during the past and present season is much larger—nearly all take, with many very sore arms. If susceptibility to vaccine is a test of susceptibility to smallpox poison, the proportion of unvaccinated in this vicinity who are liable to varioloid is much greater than that stated above.

Now these results, taking the whole past generation together, must be regarded as a measure of the protective power of the *long humanized* virus, for until lately no other, so far as I am aware, has been used. If, now, the *non-humanized* vaccine virus is superior, a few years may be made to settle the matter. All that is needed is for all using it to keep a record of primary vaccinations for future reference. If, after extensive use over a sufficiently long series of years, there shall be shown a less susceptibility of the system to the vaccine and variolous poisons than where the long humanized virus has been used—in other words, if less varioloid and successful re-vaccinations are the results of the use of kine virus, its superiority to protect the system will be proved, and not otherwise. F. F. B.

Reading, Mass., Dec. 2d, 1872.

COFFEE AS A VEHICLE FOR QUININE.—M. Briquet (*Bull. de Therap.*) warns against the so common use of coffee as a vehicle for quinine. When a solution of the sulphate of quinine is put into tea or coffee, there occurs a decomposition of the salt and the almost insoluble and insipid tannate of quinine is formed. This compound is almost inert, and the administration of quinine in this way, therefore, is one of the worst ever devised.—*Lyon Medicale*, Nov. 10, 1872.

Medical Miscellany.

THE DEGREE OF DOCTOR OF MEDICINE was conferred on twenty candidates at the close of the recent spring examination at Harvard Medical School.

THE COUNCIL of the Royal College of Surgeons of England recently resolved that "the practice of frequently advertising medical books in the non-medical press is, in their opinion, not conducive to the honor and dignity of the medical profession.

DR. TILT was recently elected President of the Obstetrical Society of London, and Sir William Jenner has been chosen President of the Pathological Society.

AT the last meeting of the Surgical Society of Ireland, Mr. Macnamara stated that, in a recent case of lithotomy, the patient had been anæsthetized by ether by Mr. Morgan, so successfully "as almost to convert him to the use of that anæsthetic agent in preference to chloroform."—*Brit. Med. Jour.*

TEST OF PURE AIR.—Dr. Angus Smith gives a good rule for ascertaining the amount of carbonic acid in the air of houses: "Let us keep our rooms so that the air does not give a precipitate when a 10½ ounce bottleful is shaken with half an ounce of clear lime-water; a sanitary regulation which is easily carried out."—*Med. and Surg. Reporter.*

IT is the intention of the private attendants of the late Emperor Napoleon III. to communicate to the medical profession at an early opportunity the details of his recent illness and its treatment, in a form which will convey all necessary information. The propriety of withholding comments in the meantime is obvious.

THE Medical Society of the State of New York met at Albany, February 4th, 1873, in the public hall, Perry building. The meeting was called to order by the President, Dr. C. R. Agnew, of New York. Prayer by the Rev. Dr. Clark, after which the President read his inaugural address. At the end of the third day's proceedings, the following officers were nominated for the ensuing year and unanimously elected: President, Dr. E. M. Moore, of Rochester; Vice-President, Dr. Francis Burdick, of Johnstown; Secretary, Dr. William H. Bailey, of Albany; Treasurer, Dr. Charles H. Porter, of Albany. The Society then adjourned.

AT a special meeting of the Newburyport Medical Society, held Monday, P.M., Feb. 3, occasioned by the sudden death of Dr. H. C. Perkins, remarks were made by several members present expressive of their sense of personal bereavement, and their profound sorrow for the loss of a brother whose worth was increasingly felt, and whose counsel and labors have been so highly appreciated, especially by the profession in this city and vicinity.

The following preamble and resolutions were unanimously adopted:—

Whereas, It has pleased an All-wise Providence to remove from his earthly labors Dr. Henry C. Perkins, a beloved associate and an honored member of the profession,

Resolved, That in his death we have lost a valued friend and counsellor, distinguished alike for his Christian virtues and his professional and scientific abilities.

Resolved, That while we bow in submission to the Divine Will, we deplore the loss of an active worker in the profession to which he was an honor.

Resolved, That we hereby tender our heartfelt sympathy to the bereaved family of the deceased.

ENOCH CROSS, *Chairman.*

F. A. HOWE, *Secretary.*

THE COMMENCEMENT EXERCISES of the Dental Department of Harvard Medical School took place on Wednesday, 12th inst., at noon. Selections from two of the theses were read by their authors—one, on the "Dentition of the Asiatic Elephant," by William H. Rollins, and the other, on "Salivary Calculus," by C. A. Brackett. Degrees of Doctor of Dental Medicine were conferred on five gentlemen by President Eliot. The exercises closed with an address on the Past, Present and Future of Dental Surgery in England, by Mr. Charles Tomes, M.A. Oxon., M.R.C.S., L.D.S., of London. The speaker took occasion to comment in graceful and complimentary terms on the position which the science and art of dental surgery has attained in America, and spoke cordially of Harvard as a pioneer in admitting the teaching of dentistry into the university scheme of instruction.

BOOKS RECEIVED.

A Treatise on the Theory and Practice of Obstetrics. By William H. Byford, A.M., M.D. Second Edition. New York: William Wood & Co. 1873. Pp. 455. (From A. Williams & Co.)

The Journal of Anatomy and Physiology. Conducted by G. M. Humphry, M.D., F.R.S., and Wm. Turner, M.B. Second Series. Nov., 1872. London: Macmillan & Co. (From A. Williams & Co.)

The Diseases of the Stomach. By Wilson Fox, M.D., F.R.C.P., F.R.S. Third Edition, revised and enlarged. London: Macmillan & Co. 1872. (From A. Williams & Co.)

A Treatise on Apoplexy. By John A. Lidell, A.M., M.D. New York: William Wood & Co. 1873. Pp. 395. (From A. Williams & Co.)

Dental Caries and its Causes. An Investigation into the Influence of Fungi in the Destruction of the Teeth. By Drs. Leber and Rottenstein. Translated by Thomas H. Chandler, D.M.D. With Illustrations. Philadelphia. Lindsay & Blakiston. 1873. Pp. 103. (From A. Williams & Co.)

PAMPHLETS RECEIVED.—Intussusception. By Stephen Rogers, M.D., of New York. Albany. 1873. Pp. 38.—Catalogue of Bowdoin College and the Medical School of Maine for 1872. Brunswick, Me. 1872. Pp. 56.—Transactions of the Medical Society of the State of California during the years 1871 and 1872. Sacramento. 1872. Pp. 228.

MORTALITY IN MASSACHUSETTS.—*Deaths in seventeen Cities and Towns for the week ending February* 8, 1873.

Boston, 157—Charlestown, 21—Worcester, 17—Lowell, 26—Milford, 3—Chelsea, 9—Salem, 9—Lawrence, 15—Springfield, 3—Lynn, 10—Gloucester, 2—Fitchburg, 6—Taunton, 4—Newburyport, 3—Somerville, 12—Fall River, 21—Haverhill, 4. Total, 322.

Prevalent Diseases.—Consumption, 52—smallpox, 39—pneumonia, 32—diphtheria and croup, 13—scarlet fever, 10—typhoid fever, 7.

The deaths from smallpox were as follows:—In Boston twenty-four, Charlestown three, Chelsea three, Lawrence three, Salem two, Taunton one, Newburyport one, Fall River one and Haverhill one.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, February 15th, 150. Males, 83; females, 67. Accident, 1—apoplexy, 3—bronchitis, 6—inflammation of the brain, 4—congestion of the brain, 2—disease of the brain, 3—burned, 1—cancer, 1—cerebro-spinal meningitis, 1—cyanosis, 1—consumption, 19—convulsions, 1—croup, 1—debility, 5—dropsy, 1—dropsy of the brain, 6—diphtheria, 3—erysipelas, 2—scarlet fever, 9—typhoid fever, 3—gastritis, 2—inflammation of the hip-joint, 1—disease of heart, 5—hæmorrhage, 1—intemperance, 2—jaundice, 2—disease of the kidneys, 4—laryngitis, 1—disease of the liver, 2—congestion of the lungs, 6—inflammation of the lungs, 10—marasmus, 6—old age, 3—paralysis, 3—premature birth, 1—puerperal disease, 2—pyæmia, 1—scrofula, 1—smallpox, 17—unknown, 5.

Under 5 years of age, 65—between 5 and 20 years, 16—between 20 and 40 years, 29—between 40 and 60 years, 16—over 60 years, 24. Born in the United States, 117—Ireland, 18—other places, 15.

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Original Communications.

EXTRA-UTERINE PREGNANCY.

By T. C. Lawton, M.D., Cranston, R. I.

Mrs. E. was married, at the age of 22 years, in 1831; became pregnant for the first and only time in 1841, and expected to be confined in July, 1842. Previous to pregnancy, she had always enjoyed good health.

During the first seven months of gestation she was sick all the time, having spasms every month, and at the time when the menses should have appeared. The first two or three paroxysms were so severe that her life was despaired of, and for three months of the seven she was confined to her bed. For the last two months, there was no recurrence of the spasms, and her health was much better. About the seventh month she felt an uncommonly active movement of the fœtus, which, as she expressed it, ended in a grand flopping over and falling backwards and to the right side. After this, she felt but very slight if any motion. A short time before her expected confinement, she received quite a jar, by jumping from a carriage, and of this she always complained, and referred her subsequent trouble to it.

At the expiration of the ninth month, she was taken with labor pains, accompanied by a considerable show. As these increased, she took a dose of morphine, after which they ceased, and never returned, although her physician, the late Dr. Fearing, did all that he could to bring them back. The discharge continued for ten days or a fortnight, during which time the size of the abdomen considerably diminished and the fœtus settled down considerably lower. She was soon about, but for more than a year her health was very poor, and she was unable to walk without great difficulty, besides being very low spirited. After that time, she began to improve and to enjoy her usual good health, but she was always troubled with a lameness and a difficulty in getting into or out of a carriage. The menses came on after the threatening of labor, and she continued regular for ten or twelve years. The fœtus always troubled her more or less. Besides the weight, she always felt a sensation of coldness, and sometimes more or less soreness, in the right iliac and hypogastric regions, and she was troubled with prolapsus uteri for a year or more after. She is said to have had, during the following summer, an attack of inflammation of the bowels, which was very severe, and was probably peritoneal. She was troubled with erysipelas, more or less, in subsequent years.

I first saw her, professionally, Dec. 14th, 1869, and saw her occasionally from that time until the June following. When first called, I found her suffering very much from dyspnœa (apparently asthmatical) and from severe pain in the stomach and bowels, with nausea, but no vomiting. Her account of the attack was as follows:—Had felt as well as usual through the day. About 4, P.M., ate a hearty dinner of baked fresh pork and beans. Soon after, started to ride to Olneyville. While getting into the carriage, she felt this tumor, which she said was a child (and which I did not believe), tip over from the right to the left side. The pain and dyspnœa came on soon after. She rode about a mile, and turned back home. She was relieved by an emetic, followed by anodynes. The tumor was in the lower part of the abdomen, to the left of the median line, supposed to be a fibrous growth. For several months after this, she suffered more or less from dyspnœa and dizziness, and from soreness in the left iliac and hypogastric regions. She was unable to walk much, on account of the shortness of breath and the soreness low down in the abdomen, but rode a great deal. Much of the time she could not lie down. She was a very active and resolute lady, and could not be kept still when she could possibly be moving about.

From June, 1870, to May, 1871, she was not my patient, but she was always doctoring, and ready to try anything and everything that was recommended to her. The only regular practitioner who treated her during this time, so far as I know, was Dr. Peckham, of Providence, R. I.

May 21st, 1871, I was again called, and attended her until her death. I found her a good deal emaciated, very weak, with shortness of breath, the dyspnœa much aggravated by exertion or talking. She had anasarca of the lower extremities and of the abdominal walls. I could not detect any accumulation of fluid within the abdominal cavity. The lower extremities became very much swollen, and were punctured extensively with a lancet. By this means, large quantities of water (probably several gallons) were got rid of, the swelling of the abdominal walls almost entirely disappearing, and that of the limbs being greatly diminished. She continued in much the same way, failing slowly, until about a fortnight before she died, when erysipelas set in. A large blister, which appeared on the right leg, constantly extended, and the other leg was soon in the same condition. Before her death, the right limb, from the heel to the middle of the thigh, was one continuous erysipelatous sore, and the left was nearly as bad. She died July 17th, 1871, aged 62 years, and twenty-nine years after her expected confinement.

July 18th, assisted by Dr. C. T. Gardner, I made a *post-mortem* examination, in the presence of Drs. Peckham, Perry, Remick, Browning, and others. The fœtus, with the uterus and a portion of the membranes that were attached, weighed 4½ pounds. It was found in the epigastric region, to the left of the median line, attached slightly to the left ovary, and was not contained in a sac; lying back of the small intestines and bladder, and anterior to the womb. No trace of a placenta. Old peritoneal adhesions quite extensive. Organs of abdomen and thorax in a normal condition.

The fœtus having been dried, the head and trunk appear to be sufficiently well developed, as are the extremities for the most part. The right upper extremity crosses and is pressed firmly upon the front of the chest. A thick and indistinct mass is seen in place of the left hand; a large part of the humerus is quite denuded, and it is the only bone that is not perfectly covered; and from the forearm there hangs off something, which may be the uterus. Right lower extremity strongly flexed upon the body, and the leg very strongly upon the thigh, the foot forming an indistinct mass, not unlike the left hand. The left stands off from the body, and the foot is very strongly bent against the leg. From the lower part of the body there hangs off a large piece of membrane that resembles the omentum.

THE TREATMENT OF ERYSIPELAS.

By Dr. v. Kaczorowski.

Translated for the Journal from the Berliner Klin. Wochenschrift, Dec. 30, 1872, by E. Wigglesworth, Jr., M.D.

During the last three months so many cases of erysipelas have occurred here in Posen, that we are justified in speaking of an epidemic of this disease.

The same has occurred in other large cities, especially in Berlin.

The malady, especially in advanced cases, has been characterized by a marked intensity in the nature of the symptoms, excessive dermatitis, with mortification of the skin of whole limbs, and a tendency to spread over the entire surface of the body.

The object of the physician has always been to interpose a barrier to the progress of the inflammation outwards from its starting point, since this progress guages the injurious effects of the disease.

The following remedies, arranged according to their value—nitrate of silver, collodion, oil of turpentine, cold, tar—do not, unfortunately, always suffice, and erysipelas is only too common, in the case of many people, after even apparently slight injuries or operations.

Since the disinfecting properties of carbolic acid have become more thoroughly recognized, I have instituted a series of experiments, extending over the last two years, with regard to the action of this agent in cases of this disease, basing my anticipations of a favorable result upon my belief that erysipelas is an infectious disease, dependent upon the presence of micrococci, a belief justified by the concurrent testimony of the investigations of von Recklinghausen, Waldeyer, Hueter, Klebs and Orth.

The results of these experiments have been extremely favorable, almost without an exception.

Appreciating the deceptiveness, as a rule, of infallible remedies, and the consequent disappointment of the practical physician, I have refrained from the publication of my method of treatment so long as my observed cases were few in number. But the extended opportunities of investigation offered me in the hospitals during the last few months, both as to number of cases and severity of symptoms, have confirmed my beliefs, and warrant their introduction to the medical public.

My colleague, Dr. Samter, who has charge of the female wards of the City Hospital, has adopted my method of treatment, and neither of us has thus far lost a single case of erysipelas, although many very advanced cases have been sent to us, completely exhausted, and with gangrenous destruction of the skin of entire arms and lower thighs.

The treatment is a combination of several factors, the object of which is, on the one hand, a repression of the development and of the extension of the globular bacteriums, and, on the other, the support of the resisting power of the organism, the activity of the heart, by stimulation and an easily digestible diet.

To obtain the first result, those parts of the skin which are affected already by erysipelas are rubbed, by means of the finger or a little sponge, every three hours with a mixture of carbolic acid and oil of turpentine (1 : 10), but *very gently;* the skin in the neighborhood, however, more energetically. The whole district rubbed is then covered with a soft linen compress moistened with concentrated lead water (1 : 100), and finally the parts affected already by the disease are again covered, outside of this compress, by thicker linen cloths dipped in ice water and lightly wrung out, or by a bladder of ice.

The external enveloping compresses with ice water are changed as often as they begin to grow warm.

The head or a whole extremity may be thus covered with ice-water compresses; lesser affected surfaces on one level may be covered by the ice bladder, which requires a less frequent renewal.

Internally, the patient takes lemonade or a weak solution of chlorate of potassa, to alleviate the accompanying stomato-pharyngitis and prevent diphtheritic depositions, and every one or two hours a teaspoonful of strong wine, to support the action of the heart.

In very rare cases, accompanied by excessive adynamia, a few doses of camphor were exhibited.

For the relief of pain and the limitation of the exudative process, a subcutaneous injection of morphia (0·005–0·01) is made morning and evening in the vicinity of the parts affected.

Regular operations of the bowels are induced by cold-water clysters or castor oil.

The subjective condition of a patient under this treatment is quite endurable, for he lies the whole time in a light doze, almost without pain.

Objectively, we notice, on the places which have been rubbed, at first increased redness of the skin, which extends more and more, under the successive inunctions, over the previously healthy skin surrounding the erysipelatous patch, frequently producing vesiculation and loss of epidermis.

This artificial erythema of the previously healthy skin is easily distinguished from the erysipelatous district, since in the periphery of the former there is wanting the œdema of the skin which accompanies the erysipelas.

We next observe a dryness and shrivelling of the epidermis of the erysipelatous patch, as if this had been slightly tanned. This condition soon extends outwards, over the surrounding territory, although less in degree.

In the course of twenty-four to forty-eight hours, the exudative process is cut short, as is manifested by a somewhat abrupt fall in the temperature of the skin and in the frequency of the pulse. This is the signal to desist from the inunctions, though the lead-water compresses around and outside of the erysipelatous patch may be continued for one day or more.

When this treatment has been pursued, we have never seen a relapse.

If the erysipelatous process extends itself beyond the time stated, it is the fault of the attendant, and no such case has occurred in our experience since we impressed this fact upon our hospital nurses.

Finally, I must remark that the use of tar, as recommended by Prof. Hueter, is based upon these same principles.

Where I have employed tar, the desired result has been less speedily obtained than by my own method, possibly because the tar, from its consistence, is less thoroughly taken up by the skin than the more fluid oil of turpentine, impregnated with carbolic acid.

Tar is also less well adapted for use upon the scalp, especially in the case of ladies, than my solution, in which the oil of turpentine conceals almost entirely the smell of the carbolic acid.

Above all, I hold that the use of tar alone, without the simultaneous employment of cold, is insufficient for the speediest possible cutting short of the process.

A HINT FOR THE POLICE.—By order of the Prefect of Police in Paris, large tablets, comprising the elementary precepts of aid to be given to the sick and wounded, are to be suspended in all the police stations of the city, in order to avoid errors in confounding the insensibility of apoplexy, &c., with that of drunkenness, and to prevent mistakes in immediate proceedings before the doctor can arrive.—*London Medical Record.*

Progress in Medicine.

REPORT ON PUBLIC HEALTH.

By George Derby, M.D. Harv.

Statistics of Health and of Population.

Some of the most valuable results of sanitary research are expressed in figures, and they are often of appalling extent. The average mind shrinks from the attempt to collate and digest them. The enthusiasm of a student of this department of science is needed to carry him through such a wilderness in pursuit of useful knowledge.

Attempts have been often made to reduce these statistical results to a form which would arrest attention, and give at once the more striking conclusions.

All readers are familiar with the tables or plans representing, by waving or diagonal lines, the course of the epidemics, variations of temperature, and many similar subjects. Straight lines, and cones and blocks, are also used in school geographies to show the comparative length of rivers and height of mountains.

Some recent attempts to express in a simple way the results of statistical research are very successful. The Census Bureau at Washington has just issued a series of small charts of the territory of the United States, each of which is colored so as to show at a glance the comparative condition of the population in certain respects in 1870, the year of the ninth census. Each chart has its own color, and each color has four or five degrees of intensity. We have thus represented to the eye, in a very striking way, 1st, the density of population; 2d, the distribution of the foreign population; 3d, of the colored population; 4th, of the Irish; 5th, of the English and Welsh; 6th, of the Swedish and Norwegian; 7th, of the German; 8th, of the British American; 9th, of the Chinese. There are, also, charts showing the illiteracy and wealth of the Nation, the one based on the inability to read and write, and the other on the returned value of property with reference to population. Still another shows in the same way the acquisition and transfer of territory from 1780 to 1870. All these charts are beautifully made, and will be found exceedingly useful.

The "Annales d'Hygiene" for 1871 contains statistical charts, prepared by Dr. Bertillon, which show the comparative mortality of infants in different parts of France, and also plans illustrating, by means of lines, and rectangles of different sizes, the comparative mortality of married and unmarried persons of both sexes, and at all ages, in France, in Paris, in Belgium, and in Holland. The general result of this latter inquiry goes to confirm the deductions made some years ago by Dr. Stark in Scotland, and makes very clear the fact that the married of both sexes live longer than the unmarried.

It has, however, been suggested, and we think with much reason, that the married are "selected lives"—health being one of the important elements of sexual attraction and selection.

Reception of certain Poisons during Sleep.

A writer in the London *Medical Times*, puzzling over the indubitable fact that sewer men and "night cart" men are not so liable to suffer from the specific poisons of the materials with which they have to deal as we might expect, suggests that possibly the body is more ready to receive these poisons *during sleep*, and may repel them during waking hours. This idea seems well worth keeping in mind by physicians, to be proved or disproved by careful observation. The proclivity to take malarial fevers *by night* on Southern plantations may be remembered in this connection.

THE DEODORIZATION AND UTILIZATION OF ANIMAL REFUSE.

Mr. S. P. Sharples, State Assayer, read a paper on this subject before the "American Academy of Arts and Sciences" in Boston, January 29th, 1873, and permits us to make the following extracts: After alluding to the great interest which is now shown to exist in America in the utilization of the blood and offal of slaughtering establishments as fertilizers,* and the numerous patents which have lately been secured for its accomplishment, three new processes are described.

The first of these is purely mechanical, and does not call in the aid of chemistry. It is in use in the extensive pork-packing establishment of Messrs. Charles North & Co., at East Cambridge. Mr. Squires has also just introduced it, and it is to be used at the new abbattoir at Brighton.

The apparatus is known as "Hogel's dryer." It consists of a horizontal cylinder furnished with a steam jacket. Through the axis of the cylinder is passed a steam-pipe which is divided longitudinally in two semi-circular parts; one of these serves as an induction pipe and the other for the exhaust. This pipe is so connected with a series of arms that the steam passes out through one arm, and into the exhaust through the next arm, the arms being connected with each other by circumferential pipes. This axial pipe, with its connecting arms, is revolved by suitable gearing.

All parts of the animal that cannot be packed, including the head and entrails, which are previously washed, are put into large steam digesters and heated for some time under a pressure of 40 or 50 pounds per inch. This completely disintegrates the bone and tissue, and allows the fat and grease combined with them to rise to the top of the water contained in the tank. During this rendering, considerable quantities of offensive hydrocarbons, mixed, perhaps, with some phosphide and sulphide of hydrogen, are given off. These it is proposed to conduct into the ash pit of the furnaces employed for heating the boilers. To escape from here, they will have to pass through three or four inches of incandescent coal, and by this they will be decomposed and rendered inodorous. After the rendering is finished, the bone and scrap are removed from the digester (the grease and soup having previously been drawn off) and placed in the dryer. The blood of the animals slaughtered is now added and the machine set in motion. In the course of a few hours the whole mass is reduced to a dark-red powder, interspersed with fragments of bone, which are, however, very friable. The product is then run through a revolving sieve to separate the coarser portions which are then ground by a suitable mill and again mixed with the fine portion. The gases escaping from the dryer are treated in the same manner as those from the rendering tank.

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* Labor is so expensive (at least in the Northern and Western States) as to forbid the extraction of albumen from the blood of animals.

This process appears to be very advantageous to those employing it. There are, however, some objections to its use. When the dryer is opened to remove its contents there is a very strong smell of roast meat from the hot dust. It is not profitable, or hardly even possible, to dispose of the "soup"* in this manner, as the gelatine is very difficult to dry, and moreover it soon clogs up the machine, sticking fast to everything it touches when it becomes nearly dry. The ordinary "soups" from rendering animal refuse contain only about five or six per cent. of solid matter, not more than one or one and a half per cent. of this being nitrogen.

The fertilizer produced by this process is especially valuable for the nitrogen that it contains; the phosphoric acid being almost entirely in the form of tricalcic phosphate. Analysis gave:—

Phosphoric acid,	12.15
Nitrogen,	7.89
Water,	10.22

At the price at which this dust is sold at present it is the cheapest source of nitrogen.

Col. J. J. Storer, of Boston, has patented a process for using the refuse, that may be employed when fuel is plenty, and it is not a special object to save as much as possible of the animal matter. It consists of a modification of his well-known reverberatory furnace. The material to be desiccated is placed upon the sole of the furnace, and all gases arising from it are at once consumed in the upper portion of the furnace. He claims to be able to dispose of all the soup by this process. An average of two analyses of the fertilizer produced gives:—

Nitrogen,	3.09
Phosphoric acid,	13.63
Water,	7.13

This, as in the former case, is chiefly valuable for the nitrogen it contains. But it is not in as readily available a form as in the previous case, as it has been over-heated, and is mingled with considerable animal black.

The third and last method to be mentioned is that of Mr. Wilson. This is a natural outgrowth of the manufacture of the "Rumford Yeast Powder." It is in use at Brighton, at the establishment of Mr. Geo. Upton. The scrap from the digesters and also the soup are utilized here. The gases from the tank are burnt by first passing them through five hundred feet of iron pipe, heated to redness in order to superheat the steam, and then introduced, when mixed with the proper amount of air, into the furnace by which the coil is heated.

The process consists in treating the scrap and soup with a very acid phosphate of lime made from the refuse char from the sugar-houses. This is done in tanks lined with lead and having coils of lead pipes in the bottom, by which the contents of the tanks are boiled. This produces an exceedingly valuable fertilizer. When the material is first removed from the tank it is in the form of a stiff paste. This, by exposure to the air and by crystallization, becomes at length so dry that it can be handled. A specimen dried at 100° C. gave an analysis:—

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* This is the technical name given to the thin and watery portion, which is neither grease nor scrap.—(REPORTER.)

Water,	6.62
Soluble phosphoric acid,	15.57
Insoluble " "	3.19
Nitrogen,	1.69
Sulphate of lime,	50.49

together with bone char, &c.

This process, however, is not free from objection. It makes no provision for disposing of the blood conveniently. It is not as free from disagreeable odor as a perfect process should be. When the bone char is being acted upon by the sulphuric acid, there are always more or less disagreeable acid odors given off.

It also depends on a full and constant supply of refuse bone-black. A failure of a few days in the supply involves the establishment at once in difficulties.

None of the processes that I have mentioned can be considered as perfect, but they are all decided improvements upon those which for years have rendered the slaughtering establishments of great cities such a nuisance."

Slaughtering of Animals.

A writer in the London *Med. Times and Gazette,* June 29th, 1872, thinks that the *rigor mortis,* which gradually comes on as the meat cools, prevents putrefaction by allowing the juices to "set," and preventing the mixture of the alkaline blood with the acid juice of the flesh.

In the neighborhood of Boston (and we think nowhere else), the carcasses are hung up in huge ice-houses or refrigerators, and there kept for many days. This is a great advantage in summer, both to the butcher and consumer, as experience has shown that freshly killed meat is (comparatively) unpalatable, and we are inclined to think that it is also less wholesome.

The practice of our Brighton butchers tends to confirm the observation of the English writer. They have found it essential to let the *rigor mortis* have its full effect and all animal heat disappear from the meat before placing it in the ice-houses, where the uniform temperature is about 40° Fahrenheit.

The Sewage Question.

This is the most prominent sanitary question now under examination in England, and many costly experiments are being tried by private companies and municipalities in the endeavor to turn sewage to profitable account without danger to public health. We have a large number of printed documents relating to this important subject, but refer the reader for its general discussion to the fourth report of the State Board of Health of Massachusetts, now in press.

The following sentence which we quote from a recent writer in the London *Medical Times and Gazette* well and briefly expresses the object of all efforts in this direction:—

"As life involves the conversion of food into sewage, so science must convert sewage into food, and deal with it so as to make the earth fertile, the air pure, and the water sweet."

VENTILATION OF WORKSHOPS.

Dr. J. H. Stallard, at the Leeds Sanitary Congress, proposed a plan for ventilating workshops by means of a false ceiling of oiled paper, or of zinc with abundant perforations, and having between this false ceiling and the real ceiling a space in free communication with the outer air on all sides. Through the operation of the law governing the diffusion of gases, this plan, he thinks, would afford air of great purity. The suggestion is certainly ingenious, but would be applicable only to one-story workshops, or to the story next the roof. It would also be impossible to warm such a workroom in weather like that of Massachusetts in mid-winter.

SMALLPOX.

At a meeting of the Epidemiological Society in London, Nov. 12th, 1872, it was stated by the President, with regard to smallpox, that the epidemic was widely diffused in 1871 and 1872, and had been present in Europe and Africa from south of the equator to the Arctic Ocean; in Asia from Southern India to Siberia; in America from Chili to Canada.

BRAIN-WORK AND BRAIN-WORRY.

From this text has proceeded much profitable hygienic discourse of late in some foreign journals. The conclusion reached is this:—brain-work is conducive to health and longevity, while brain-worry causes disease and shortens life. The truth of the statement, and its application to what we see around us, is evident enough; yet it is well that such subjects should be contiually discussed. Intellectual labor, although severe, like that performed by the judges of our highest courts, or by scholars and persons devoted to literary pursuits, if unmixed with excitement, and followed with regularity, is seen to promote bodily health and long life. On the other hand, mental cares, attended with suppressed emotions, and occupations which from their nature are subject to great vicissitudes of fortune and constant anxiety, break down the lives of the strongest. Every one has seen a class of men whose early mental training was deficient, and to whom the writing of memoranda was irksome, engaged in middle life in great undertakings, and taxing the memory with a mass of complicated business accounts, simply because they could more easily remember than write. Their power of memory for a certain kind of facts is often truly astonishing, but the strain is at last too much and they die before their time. The brain-worry of our school children might furnish useful illustrations of the truth of the same general proposition, but we forbear.

AIR AND RAIN. By Robert Angus Smith, F.R.S. London: Longmans, Green & Co. 1872.

Whoever has had occasion to study air in its sanitary relations, of late years, has been led of necessity to burrow among the heaps of "blue books" issued by the British Government in order to find the original investigations of Dr. Angus Smith. And the more they have been studied, the more evident it has become that here, indeed, are found not only the most exact results of modern science, to whose pursuit a long life has been devoted, but that their interpretation and practical application have been also presented in a philosophical, scholarly and perfectly intelligible way.

These various studies and reports which have been pursued under public authority, together with occasional papers read before scientific societies, have been recently collected and published by Dr. Smith, with many new reflections and conclusions. A volume called "Disinfection" appeared two or three years ago, and now we have "Air and Rain." This book is invaluable to all who are interested in sanitary science. No one before Dr. Smith has made such examinations of the constituent parts of the atmosphere in its natural condition, or of the various inorganic and organic substances which are mingled with it, or of the changes which they all undergo. His experiments in the "lead chamber" are simple in their conception and most instructive in their results. To him is due the clear demonstration of the direct influence on vitality of very minute changes in the proportions of oxygen and carbonic acid. Mingled with the history of experiments in mines and buildings, which are given with singular clearness, we find reflections upon ventilation, the germ theory of disease (with an able analysis of the views of Liebig and Pasteur concerning decomposition and fermentation), and hints and conjectures enough on these and cognate subjects to give direction to the studies of another generation of workers like himself, if fortunately they should appear. The fairness, breadth, and thorough honesty of Dr. Smith's mind are no less remarkable than its acuteness. Speaking of the persistency of some theorists on ventilation in demanding absolutely pure air at any cost, he says: "The chemical action of the human body demands warmth first above all things. No function can go on without it. You may live for hours, days or years, in badly ventilated places with more or less discomfort and danger, but a draught of cold air may kill like a sword. Such a universal instinct must not be sneered at."

There are many similar passages with regard to the sense of smell, the instincts of mankind in all ages, fortified by passages from early writers who used only their natural senses, which, coming from one devoted to exact science and who has greatly extended its boundaries, have unusual force. Finally, there are chemical and philosophical reflections on the influence of soils and climates which are full of suggestions of the deepest interest.

HEALTHY HOUSES. By William Eassie, Civil Engineer. London: 1872.

This is an exceedingly useful hand-book, in which may be found a great deal of information concerning the hygiene of dwellings, illustrated by several hundred wood-cuts.

The author is concise, and eminently practical, giving the trade price of every appliance which can enter into house construction.

Although the book is specially designed for English readers, it will be equally useful in this country, and it is quite remarkable to observe the familiarity of the author with the peculiarities of house building in the United States, and with American inventions.

TREATMENT AND UTILIZATION OF SEWAGE. By W. H. Corfield, Prof. of Hygiene, Univ. College, London. Second Edition. Macmillan & Co. 1871.

This volume is already well known in the United States, and must inevitably be sought for wherever the subject to which it relates is under investigation.

It puts in convenient form the abundant materials which were previously buried in Government Reports, presents the arguments on both sides of many disputed points, and finally sums them up with great ability.

A MANUAL OF PRACTICAL HYGIENE. BY E. A. Parkes, M.D., F.R.S. Third Edition. London: 1869.

This is not a new book in the date of its publication, but in the search for exact information on every subject connected with public health it is the fountain of knowledge to which physicians and sanitarians must constantly resort. The resources of this invaluable treatise are made apparent when, after years of use, we find that it never fails to throw light on any hygienic question which may be proposed.

This volume and Tardieu's "Dictionnaire d'Hygiene" are the highest authorities for general reference on sanitary subjects. Dr. Parkes's Manual is furnished to the medical officers of the United States Army, and should be accessible not only to all physicians, but to the Boards of Health of our cities and towns.

LEÇONS ELEMENTAIRES D'HYGIENE. Par V. Cornil. Baillière. · Paris: 1873.

The Minister of Public Instruction (M. Jules Simon) has ordered a course of instruction in hygiene to all classes of philosophy and mathematics in the schools and colleges of France, and special divisions of the subject are prescribed.

The little volume of which the title is given above is an attempt to furnish a text-book for this purpose. It is not only unsuccessful, but cannot fail to bewilder any young person ignorant of anatomy and physiology.

DIE STAUBINHALATIONS KRANKHEITEN UND DIE VON IHNEN BESONDERS HEIMGESUCHTEN GEWERBE UND FABRIKBETRIEBE. Von Dr. Ludwig Hirt. Breslau: 1871.

The present work forms the first of a proposed series, which have for their object the consideration of the diseases of the laboring classes. The author elaborates a subject which has been under investigation for many years by most distinguished scientists. The general plan of the work is to show the connection of cause and effect which exists between the inhalation of dust, of various kinds, and certain internal affections, with the view of avoiding the ill effects so far as possible. Affections of the heart and abdominal organs sometimes occur, though those of the respiratory organs are most frequent and most important. Statistical results are obtained from analyses of cases treated at different hospitals throughout Europe, the results being obtained from over seventy occupations, in which there is greater or less exposure to the inhalation of dust.

He shows that, while in the laboring classes, thirty-five per cent. of the internal affections are cases of catarrh, pneumonia, phthisis, &c., among those whose work exposes them to a dusty atmosphere fifty to sixty per cent. and even more expresses the ratio of frequency of diseases of the respiratory organs.

The mechanical irritation produced by the inhaled particles induces a *catarrhal* condition, which, in most instances, is the origin of the other and more serious affections, pneumonia, &c., though the latter arise independently in exceptional cases. In some instances, a catarrhal affection of the respiratory organs occurs in fifty per cent. of the cases, chronic bronchial catarrh being most frequent, tracheal catarrh coming next in order, and laryngeal catarrh occurring still less frequently. According to his tables, vegetable dust is the most common origin of catarrhal affections, while metallic, animal and mineral forms are less frequently the cause in the order named.

If the chronic bronchial catarrh is allowed to progress, and proper measures are not taken in the way of direct or indirect isolation of the patient, there results, in not a few instances, the condition known as *emphysema* of the lungs. It is estimated that, on an average, one in eight or ten becomes the subject of this affection, though in some occupations, e. g., with stone-cutters, common laborers and scavengers, the percentage of cases of emphysema differs but little from that expressing the relative frequency of chronic bronchial catarrh. Emphysema appears to be the effect, most frequently, of the inhalation of mineral dust, less often of vegetable dust, while metallic and animal dust afford about an equal percentage and less than the other forms. Particles which occasion direct violence to the mucous membrane and lung tissue are not concerned in its development so much as those which are removed with difficulty in consequence of their minuteness and irregular shape. Usually it is the result of preëxisting catarrh. While some may express doubts as to the connection of cause and effect between the inhalation of dust and the development of emphysema, there is more reason for questioning the connection of the so-called "nervous asthma" with the same cause, since it remains undecided whether this affection is due to a paralysis of the bronchi, innervation in the muscles, to an abnormal irritable condition of the vagus, or if it is to be considered, always, as a symptom of a disease of the lungs or heart. Nevertheless, it is a well-known fact that it is not uncommon for the inhalation of ipecac, new-mown hay, &c., to induce an immediate attack of spasm of the bronchi, asthma, &c.

The primary catarrh sometimes leads to *dilatation of the bronchi, bronchiectasis*, though its occurrence is no more and no less frequent with the operatives in question than with others. Occasionally, it is the result of ulceration of the bronchial mucous membrane, produced by the violent action of inhaled sharp particles.

Inflammation of the lungs occurs not merely as the result of preexisting chronic catarrh, but may be induced directly by the inhalation of dust, the former being the case most frequently. In proof of the occurrence of primary pneumonia, a case is cited (p. 16) which came under the author's personal observation, where a boy had seven attacks of pneumonia after longer or shorter intervals; they were not preceded by any chronic catarrhal condition, and were directly traceable to the effects of the dust which he inhaled in a cotton factory where he was employed. Dust composed of vegetable matter appears to be more liable to produce pneumonia. Animal dust is almost equally dangerous; next in order comes metallic, and finally mineral dust. Exceptions, however, to these relations are frequent. Pneumonia is more frequent with the operatives in question than with others. Statistics show that, in a hundred patients who have been exposed to dust, 7.4 per cent. are affected with pneumonia, while in 100 others not so exposed (tanners, barbers, brewers, tailors, &c.), only 4.6 are so affected. The comparatively high percentage furnished by tanners might deceive one, but it should be borne in mind that they are exposed very much to cold and dampness, the most frequent causes of pneumonia. The locality of the disease, in the case in question, differs from that in ordinary cases. While in the latter the lower lobes are affected thrice as often as the upper, the reverse is true of the former. Upon anatomical grounds, the right lung should be affected most frequently, though statistics are wanting to determine whether this is actually the case or not.

Phthisis non-tuberculosa.—Aside from the influence of other causes in the production of phthisis, the agency of the inhalation of dust in producing the same result has not been lost sight of by numerous writers. While the theories of Laennec in respect of the nature and origin of phthisis were admitted, the connection of cause and effect in question would not hold. Since, however, it is now admitted that phthisis, in the majority of cases, does not consist in a new-formation in the lung-tissue, but, rather, is induced by a chronic inflammatory process in the same, the above connection is no longer obscure. In fact, Niemeyer's exposition of the origin of phthisis is accepted and the author then finds an easy solution of his problem. He says, chronic irritation gradually induces chronic inflammation. Although, at first, the system may be in a condition to withstand, for a time, the injurious effects, still it must soon succumb because, as a result of the bronchial catarrh, the respiratory movements become so modified that the particles of dust more rapidly, more readily and in greater number, enter the bronchi and reach the alveoli where they finally set up a marked inflammatory condition.

He shows that phthisis is more common among those exposed to dust than with others. The disposition is found to be increased with those whose occupations require a continual sitting posture. On the other hand, if the occupation allows a change of position and free respiration, the disposition to phthisis is diminished in no slight degree. Indeed, in some instances, the diminution is so great that such operatives furnish a less percentage of phthisis than others who are not exposed to dust, but who are compelled to restrict themselves to a constant sitting posture and a strained position; e. g., blacksmiths and locksmiths in one class, and shoemakers in the other.

In a hospital at Breslau, from 1859–1869, and one at Würzburg from 1859–1865, 12,647 workmen, whose occupations had exposed them to the inhalation of dust of various kinds, were treated for internal affections, and of these, 1,936 or 15.3 per cent. were affected with phthisis. On the other hand, of 1,110 workmen who had not been so exposed, 153 or 13.7 per cent. suffered from the same disease.

Comparison of the death-rate, also, shows that in 100 dust-breathing workmen a larger number die from phthisis than in 100 others who have not been subject to the same influence. Neuville (Lebensdauer und Todesursachen 11 verschiedener Stände und Gewerbe. Frankfurt a. M. 1865), in his statistics, gives more than 300 deaths from phthisis in 1000 from all causes among dust-breathing operatives. Perron (Annales d'Hygiene, 2 Ser. t. 16, 1861, p. 70) found that among watchmakers, 60 per cent. die of phthisis. The author's tables do not comprise a very large number of cases and, therefore, are less valuable. He found 47·8 per cent of deaths from phthisis in 763 deaths among dust-breathing workmen, while of those who had not been exposed to dust, only 38·6 per cent. died from this disease. Among the harness makers 76·9 per cent., wood turners 66.6 per cent., glaziers 63.6 per cent., common laborers 42·2 per cent., cabinet makers 46·0 per cent., carpenters 36·6 per cent., &c. of the deaths were due to phthisis. On the other hand, among coopers only 7.6 per cent., tailors 34 per cent., shoemakers 44 per cent. were due to the disease in question.

From an examination of table IV. (p. 30) it will be seen that the different kinds of dust produce varied results in the way of inducing phthisis. These results differ somewhat from those obtained by other observers; e. g., Lombard (Annales d'Hygiene, &c., t. xi. 1834) & Benoiston de Châteauneuf (Annales d'Hygiene, t. vi. 1831). The relative duration of life among dust-breathing workmen, as given by the author, coincides pretty nearly with the results furnished by Lombard, who, placing the average duration of life in the working classes at 56 years, found that among those exposed to metallic dust the average length of life was 51·1 years; among those inhaling mineral dust, 52 years; vegetable dust, 51·4 years; animal dust, 57·5 years; giving an average of 53·5 years for all dust-breathing workmen. The author's averages are as follows, in the same order: 53, 49, 52 and 54 years (vide general table). They differ, however, again, in the results as to the effects of animal and vegetable dust respectively. While Lombard found that the former appeared to be least dangerous in the way of inducing phthisis, the author finds that the disease occurs most rarely among those who inhale vegetable dust. They agree, however, in the main, in showing that dust composed of organic matter is least dangerous. Exceptions are not infrequent, as will be seen in the case of workers in brass, in slate and serpentine quarries, with whom the average length of life is somewhat more than the mean duration of life in the industrial classes.

Again, the author finds that while, on the average, 22·5 per cent. of dust-breathing patients are affected with phthisis, only 11·1 per cent. of those not exposed to dust are similarly affected. His results, however, are not to be considered as absolute, for other considerations are to be taken into acount which might change the relations.

In the second section of this part of the book, the author considers at length the specific internal diseases which are said to be induced by the prolonged inhalation of special forms of dust. These are embraced under the general term, "pneumonoconiosis," and comprise, so far as investigations have been made up to the present time, the following:—

1. Anthracosis, the result of the introduction of coal dust into the lungs.

2. Siderosis, the result of the introduction of iron dust into the lungs.

3. Chalicosis, the result of the introduction of silicious dust into the lungs.

Note —The introduction of argillaceous earth into the lungs has been observed once by Merkel (Zur Casuistik der Staubinhalationskrankheiten. Dtsch. Archiv. f. Klin. Med. Bd. viii. p. 206 et seq. 1871).

4. Tabacosis, the result of the introduction of tobacco dust into the lungs.

5. Lyssinosis, the result of the introduction of cotton dust into the lungs.

General Table I.—Showing the effects of Inorganic Dust on Respiratory Organs in different Occupations.

Inorganic Dust. I. Metallic Dust.	Of 100 treated for internal affections among	Were affected with					Mortality among those treated.
		Phthisis.	Chronic bronchitis.	Emphysema.	Pneumonia.	Resp. organs in general.	
		pr. ct.	pr. ct.	pr. ct.	pr. ct.	pr. ct.	pr. ct.
Iron.	File cutters.	62·2	17·4	—	12·2	91·8	31·5
	Sewing needle grinders.	69.6	—	—	—	69·6	—
	Grinders (in general).	40·4	17·0	—	2·1	59.5	26·1
	Locksmiths.	11·5	9·2	2·6	5·8	29·1	15·0
	Farriers.	10·7	9·8	0·5	6.6	27·6	10·5
	Sieve makers.	42·1	10·5	—	15·7	68·3	—
	Instrument, tool grinders.	12·2	12·2	3·7	3·2	31·3	9·2
Copper.	Engrav's (Formstechern).	36·9	39·4	—	10·5	86·8	—
	Brass (bell) founders.	31·2	9·3	—	15·9	56·4	—
	Engravers (Graveuren).	26·3	15·7	5·2	10·5	57·7	—
	Braziers.	19·7	12·2	—	9·5	41·4	10·0
	Tin workers.	14·1	18·4	1·5	4·9	38·9	9·0
	Coppersmiths.	9·4	17·0	3·7	3·7	33·8	9·0
	Lithographers.	48·5	13·5	8·0	5·4	75·4	—
	Manuf. of brazen articles.	—	—	—	—	—	(?)
	Watchmakers.	36·5	19·4	2·4	4·8	63·1	22·2
Lead.	Printers.	21·6	15·6	2·9	5·2	45·3	12·2
	Colorers.	25·0	9·3	—	6·2	40·5	12·5
	Glaziers.	17·8	19·3	1·8	3·6	42·5	13·3
	Glazers.	25·0	4·4	7·3(?)	—	36·7	14·9
	Painters.	24·5	20·7	2·8	2·8	50·8	17.9
	Typefounders.	34·9	4·4	—	17·6	56·9	—
Zinc.	Workers with sulph. zinc.	6·0	12.0	1·0	6·0	25.0	—
	Those exposed to inhalation of metallic dust.	About 28	About 15	About 3	About 7	About 53	About 15
2. Mineral Dust.	Agate polishers.	—	—	—	—	—	—
	Fresco painters.	19·0	6·7	2·4	7.5	35·6	15·6
	Cement workers.	8–10	15–17	(?)	4·0	27–31	—
	Diamond cutters.	9·0	—	40·0	—	49·0	—
	Flint-stone workers.	80·0	—	—	—	—	—
	Plasterers.	—	—	—	—	—	—
	Masons.	12·9	10·4	6·5	4·4	34·2	11·0
	Millstone makers.	40.0	—	—	—	40·0	—
	Workers in porcelain.	16·0	15·0	4·0	5·0	40·0	—
	Porcelain turners.	—	—	—	—	—	—
	Sandstone workers.	—	—	—	—	—	—
	Slate quarriers.	—	—	—	—	—	—
	Slate makers.	—	—	—	—	—	—
	Serpentine workers.	—	—	—	—	—	—
	Stone cutters.	36·4	8·0	8·7	8·7	61·8	21·5
	Potters.	14·7	14·7	2·9	5·3	37·6	12·2
	Those exposed to inhalation of mineral dust.	About 25	About 11	About 9 (?)	About 6	About 51	About 16

General Table II.—Showing the effects of Organic Dust on Respiratory Organs in different Occupations.

Organic Dust.	Of 100 treated for internal affections among	Were affected with					Mortality among those treated.
		Phthisis.	Chronic bronchitis.	Emphysema.	Pneumonia.	Resp. organs in general.	
I. Vegetable Dust.		pr. ct.	pr. ct.	pr. ct.	pr. ct.	pr. ct.	pt. ct.
Coal.	Modellers (Formern).	—	69·0	17·3	—	86·3	—
	Coalheavers, &c.	2·0	12·4	8·1 (?)	14·4	46·9	7·0
	Coal miners.	0·8	16·4	0·9	4·7	22·8	—
	Chimney sweepers.	6·5	22·2	2·6	10·5	41·8	9·0
Tobacco.	Tobacco manufacturers.	36·9	16·6	4·3	2·9	60·7	20·4
Cotton.	Cotton "	10·0	—	—	—	10·0	—
Flax.	Flax workers.	—	—	—	—	—	—
	Weavers.	25·0	30·7	3·2	11·1	70·0	—
Hemp.	Rope makers.	18·9	12·6	5·4	5·4	42·3	9·0
Wood.	Cabinet makers.	14·6	10·1	3·9	6·0	34·6	11·8
	Carpenters.	14·4	6·5	6·9	6·9	34·7	10·6
	Wheelwrights.	12·5	9·2	1·3	5·2	28·2	11·2
Madder.	Madder, workers in.	—	—	—	—	—	—
Meal.	Bakers.	7·0	10·9	1·9	8·5	28·3	8.4
	Millers.	10·9	9·3	1·5	20·3	42·0	13·2
	Confectioners.	11·6	8·0	3·3	8·0	30·9	15·0
	Those exposed to inhalation of vegetable dust.	About 13	About 19	About 5	About 9	About 46	About 12
2. Animal Dust.							
Wool.	Cloth makers.	7–10	6–8	2–4	3·0	18–22	—
	Cloth shearers.	10·4	12·3	12·3(?)	8·3	43·3	10·4
Hair.	Brush makers.	49.1	28·0	—	7·0	84·1	13·9
	Hair dressers.	32·1	17·8	3·4	10·7	64·0	—
	Harness makers.	12·8	7·5	2·5	5·0	27·8	15·4
	Tapestry hangers.	25·9	11·7	2·5	10·3	50·4	14·3
	Furriers.	23·2	10·7	2·7	8·1	44·7	12·0
	Hat makers.	15·5	6·7	4·7	5·6	32·5	11·1
Bone.	Turners.	16·2	9·3	1·8	5·6	32.9	16·8
	Button makers.	15·0	25·0	3·0	7·0	50.0	—
Horn.	Workers in horn.	15·0	—	—	—	—	—
	Those exposed to inhalation of animal dust.	About 20	About 14	About 3	About 7	About 44	About 13
3. Mixed Dust.							
Glass.	Glaziers.	17·8	19·3	1·8	3·6	42.5	13·3
	Glass grinders.	35·0	25·0	3·0	7·0	70·0	—
	Glass pulverizers.	—	—	—	—	80·0	—
Rags.	Paper makers.	—	—	—	—	—	—
Manure and streets.	Common laborers.	15·1	11·0	10.7	7·6	44·4	18·5
	Those exposed to inhalation of mixed dust.	About 23	About 18	About 5	About 6	About 52	About 15

The occurrence of one or another of these affections has been a subject of discussion from the time of Joannes Bubbe (1721), if not from an earlier period. The last to doubt their occurrence were Förster and Friedreich, who maintained the pigment nature of the particles said to be found in the lungs. Zenker, however (Tageblatt der 40 Versammlung deutscher Naturforscher und Aerzte in Hanover, 1865. Nr. 5, p. 66 and Ueber Staubinhalationskrank. Deutsches Arch. f. Klin. Med., 1867, Bd. ii. p. 115), is believed to have proved the fact of the occurrence of anthracosis, and even by the analogy postulated by Friedreich, of the penetration of oxide of iron into the lungs. Similar results have been obtained by Merkel. The recent experiments, also, of Slavynsky (Experimentelle Beiträge zur Pneumonoconioseulehre. Virch. Arch. iii., Heft 2, 1869) have shown that finely-divided particles, which enter the trachea and reach the alveoli and tissue of the lungs, enter the lymphatic glands and blood of animals.

The third affection, chalicosis, has been demonstrated by Meinel (Ueber die Erkrankung der Lungen durch Kieselstaubinhalation. Erlangen, 1869) in 19 autopsies, from the anatomical appearances and chemical examination of the lungs. The results of microscopical examinations were not so satisfactory, still they showed the difference between the effects produced and those of pneumonia and phthisis.

In regard to tabacosis, only two cases have been observed by Zenker, and therefore the grounds are insufficient for an absolute opinion as to the connection of cause and effect. Experiments upon rabbits have led to no results in the way of settling this point.

The fourth affection, which A. Martens (1836) described as "pneumonie cotonneuse," is considered at length. The author finds that, except from analogy, it cannot yet be included in the same category with the preceding affections. In case, however, this analogous disease does occur, he takes exception to the term applied to it by Martens and suggests lyssinosis.

Considered together, these affections are found to present much in common: they are characterized as generally chronic, and always successors of the inhalation of dust; their diagnosis, frequently unwarranted during life, is established only after death; the pathological appearances consist in evidences of chronic inflammation and in deposits of particles of dust in the lung tissue, such as were inhaled during life. Deviations and modifications of these appearances, of course, occur. Are they, then, independent affections? Considering the post-mortem appearances, they may be termed such, but, taking their chemical history, prognosis and etiology alone into consideration, they lose their independent character, and must be considered as modifications of the familiar affection known as "chronic disseminated pneumonia".

In the next part (or Part II.) of the book, the author considers the various occupations which are concerned in producing the various affections which have been discussed in the preceding pages. They are classified, according to the kind of dust which they develop, into those which occasion metallic and mineral or inorganic dust, and vegetable and animal or organic dust. Different effects, also, are shown to be produced when the dust is composed of sharp and pointed parcles and when of blunt and rounded particles. A clear idea of this portion of the subject may be obtained from a study of the annexed general table.

The third and final part of the book treats of the methods suggested and the measures adopted for the purpose of diminishing, as much as possible, the danger ensuing from exposure to the inhalation of the various kinds of dust. He remarks upon the defective knowledge which is apparent, the world over, in regard to the diseases which have been considered, in their relation to the various occupations; he advocates more thorough and extended investigation into these relations, suggests the passage of more stringent laws governing the management of factories and the like; maintains the propriety of medical supervision of them, with the view of preventing individuals from engaging in occupations which will be likely to jeopardize their health, and of limiting the age in which individuals shall be allowed to follow certain occupations, and of prevailing upon operatives to use such precautions against the evil effects of the dust developed in their occupations as are known to be of avail.

The measures which are adopted consist in the most complete isolation of the operative from the dust to which he is exposed, and in counteracting the injurious effects of whatever dust may be inhaled.

In the way of isolation, recourse is had to many expedients by various operatives; sponge moistened with water or solution of potash, cotton wool, flax, gauze, thin oiled masks, and wearing a moustache, are mentioned as affording some protection. Special apparatuses, *e. g.* Paulin's, Brizé-Fradin's aspiration tube, &c., have been constructed, by means of which the operator is enabled to inhale fresh air free from dust. But these are objectionable on many grounds. The various decoctions, &c., employed with the view of averting the evil effects of the different forms of dust, he considers of no avail. The best measures of prevention he considers under two heads:—

1. Reduce to a minimum the amount of dust in the different occupations.
2. Effect, as far as possible, the rapid and complete removal of the dust, when formed, from the apartment in which the occupation is carried on.

In order to effect the first, various methods are to be employed, including sprinkling the floors, collecting the dust in proper receptacles, covering the machines with some material, &c.

The second object is attained by various methods of *ventilation*, which should be employed to remove the dusty atmosphere and introduce fresh, uncharged air for respiration. This object is gained in two ways—called *natural* and *artificial* ventilation—the first being effected by means afforded by nature in the differences of temperature, and the second by means of special apparatus, ventilators. The efficiency of the first depends upon laws which regulate the passage of air through a chimney, the rapidity being, within certain limits, proportional to the difference of temperature between the inner and outer atmosphere. He states that the natural ventilation is imperfect; first, because it cannot be employed except under certain circumstances, and, second, because it is not powerful enough to effect the removal of particles of dust. A combination of the natural and artificial methods is employed sometimes with advantage. This consists in establishing an artificial current by means of heat. The purely artificial method consists in forcing fresh air into an apartment by means of engine-power. In the construction of this apparatus, special precautions are necessary. The power applied should be strong enough to insure a constantly thorough change of the atmosphere of the apartment. The locality from which the fresh air is obtained should be as far as possible from that in which the dusty atmosphere is expelled. The entrance of air into, and its exit from the rooms to be ventilated, should be so arranged that the current will pass across the machines, or source of the dust. The engine is employed to produce the revolution of a "fan," by means of which a current is produced, whereby the fresh air is carried through a conduit made for the purpose, and leading to an apartment to be ventilated. The revolution of the fan produces, in the first place, corresponding movements in the surrounding air, but at the same time a centrifugal force manifests itself. If, now, the fan is completely shut in, the pressure of the air will not be everywhere the same; it will be greatest at the circumference. Taking advantage of this fact, the air is admitted to that portion of the fan nearest the axis, while its exit is made to take place through an opening at the circumference. In some instances the circumstances are reversed, the fan is made to produce a current directly from the machines to the outer air, in which cases the air from the dusty apartment first enters tunnels placed over the machines, or openings made beneath the same; it then passes through conduits, and is admitted to the axis of the fan, whose revolutions produce a current by which the dusty air passes out through an opening at the circumference. Various other modifications are employed to suit special cases. There are many occupations, however, in which methods have not yet been ascertained for insuring a proper isolation of the operatives. The author proposes that governments should offer prizes for the invention of machines or methods for accomplishing this object.

UNEQUAL DILATATION OF THE PUPILS AN AID IN DIAGNOSIS.—(*Arch. de Physiol.*, Jan.–Feb., 1872).—Dr. F. Rogue, after a series of prolonged observations made upon children, has come to the following conclusions with regard to the unequal dilatation of the pupils in unilateral affections of different organs:—

1. In many affections of the lungs, and also in case of swelling of the bronchial glands, as well as of the glands of the pericardium, the pupils are unequally distended.

2. The enlarged pupil corresponds to the affected side.

a. When both sides of the body are affected, the more widely dilated pupil corresponds to that side upon which the inflammatory process is the more recent.

b. In cases of inflammation of both lungs, as well as that of the bronchial glands, the more widely dilated pupil corresponds to the side of the affected glands.

c. If an affection of the right lung is complicated with pericarditis, the right pupil is the more widely dilated.

This phenomenon is explained by one of the more recent discoveries of Claude Bernard, viz., that the irritation of certain nerves of sensation conveys a shock through the spinal cord to the radial muscular fibres of the iris, causing the contraction of these fibres and the consequent dilatation of the pupil. It may not be unreasonably inferred that analogous changes of the pupil accompany other unilateral affections in different portions of the body.

Boston Medical and Surgical Journal.

Boston: Thursday, February 27, 1873.

The capital trial which has recently been held in this city, and which has so largely excited the attention of the public, both on account of the shocking circumstances of the murder and the remarkable nature of the so-called expert or scientific testimony given in connection with it, can scarcely be called exceptional in the latter respect; it is only an addition to the disgraceful record of criminal law in this country, the legitimate fruit of its established processes. It needed not the Wharton trial in another city to point to the possibility of a similar occurrence when occasion offered at home; it could have been predicted as inevitable by those at all familiar with the history of medico-legal cases in our courts. As long ago as 1867, this Journal called attention to the subject of medical testimony, in words which might be repeated here, as pertinent in the present case, as they have been in other criminal trials in Massachusetts since they were first written.

The relations of this case and trial to legal medicine can be very briefly stated. A man had been killed and cut up, and the Government endeavored to show, in part by the presence of blood-stains upon woodwork and clothing, that the deed was done by the accused and in his stable. The defence admitted that the stains were blood-stains, but maintained that they were the blood of a horse and were several weeks old. The murder had been committed only two or three days before the stained articles were in possession of the Government. The questions to be determined, therefore, were: The age of the stains, and from what animal was the blood derived? The first was either of easy or well-nigh impossible solution, as the case might be; the second was matter for the judgment of one well acquainted with the microscopic appearances of blood under all circumstances, trained to accurate observation with the microscope, and experienced in similar investigations. It was to be determined only by direct comparison of the blood in question with that of man and of the horse under the most varied conditions. The judgment formed upon such special investigations, upon previously acquired knowledge, and upon the recorded opinions of other competent observers, should have been given to the court with entire impartiality, without reserve and only for the sake of justice. The statements made should have satisfied the defence, as well as the prosecution, that the conclusions were fair to both alike. Such testimony is received in the spirit with which it is given, by counsel, jury and court, and its influence upon the case is seldom disturbed by the introduction of conflicting and necessarily one-sided evidence in reply.

What was the nature of the testimony offered to the jury, and what the character of the so-called experts who were allowed to testify in this case? Without taking as reliable representation all that the various newspaper reports give us, we may fairly accept certain portions of them, in which all agree, as correct. First, the chief government witness, upon whom the responsibility rested of giving to the jury the whole truth with regard to the probable age and nature of the blood-stains, did not state clearly the exact state of dryness or freshness of the materials when placed in his hands for examination; nor does it appear that he gave the absolute measurements of the corpuscles, as obtained by the micrometer, in any one of the many specimens submitted to him. He is represented as giving only their relative size as compared with those of the horse. He did make a positive statement that science could show that the blood-stains were not those of a horse, and the very loose and silly assertion that the differences in the blood-corpuscles of man and horse were as distinct as "corn and peas." Worse than this, he alluded to the apparent sameness of the blood of the stains upon the clothing of the accused and that of the murdered victim on comparison, and, although he stated that he didn't mean to say they were identical, he repeated the statement without qualification when speaking of the blood upon the stall, saying that it was "the same as that of Mr. Ellis." Such allusions are dangerous in the extreme, in spite of their absurdity, for the statement might leave a stronger impression of individual relationship upon the jury than the qualification could remove. They must also materially lighten the efforts of the defence to show the incompetency of the government expert, and cast discredit upon other conclusions presented by him, perhaps warranted by the circumstances of the case. No statements were made concerning the piece of flesh given him for examination, although it might have contained blood-corpuscles in perfectly unchanged condition, and gone far to establish the freshness of the *corpora delicti*, upon which the credibility of the conclusions offered by the government so largely depended.

With this element of uncertainty in the evidence as left by the prosecution, the course of the defence was plainly indicated, and it was not necessary to be particular in the selection of the agents to accomplish their object. With the wide latitude allowed by the court, as to the qualifications of an expert, it is always easy to find those that suit. Indeed, the wilder and more unreliable the testimony elicited from such parties the better, if in flat contradiction to the statements of government witnesses, for not only is the desired doubt thus thrown upon the results of their special investigations and conclusions, but the jury can hardly avoid the conviction that all so-called expert or scientific evidence is utterly worthless. There can be no doubt of the success of the defence in this direction. If the testimony on the part of the government was culpably weak and unwarranted in the extent and positiveness of its conclusions, many of the statements offered in opposition to them on the other side were as bad or worse; some of them were outrageous. To think of the Supreme Court of Massachusetts allowing a person to give testimony as an expert on blood corpuscles, who confessed that he had never measured them, that he had never compared those of man with those of the horse, who didn't even know the shape of a corpuscle, and who stated that if a globule were magnified 800 diameters it would only look as large as a fine "pencil point on paper"! After this it is not surprising that a witness was also permitted who talked about 10,000 diameters as a power to be used in connection with the examination of blood-stains; or that the court should have been led to reject the important and correct statement offered in rebuttal by the government that differences in the size of corpuscles can be satisfactorily determined by a power of 400 diameters; or that it interfered to accept as a qualified expert on the histological character of suspected muscular tissue a person who was admitting at the time that he had never studied anatomy or medicine regularly, and was stating that the microscopical examination of human flesh is a "part of physiological chemistry."

It is needless to multiply these incidents of a trial which every one speaks of as a disgrace to our State. To this general verdict we assent, but we are far from attaching the largest portion of it to the professions of medicine or science. The daily journals have come out in the character of scientific critics, and discuss the expert testimony with an assurance and positiveness quite equal to that they so freely condemn in the witnesses on the stand, but they have little to say of the remarkable management on the part of the government of the evidence at its command, of some of the rulings of the court, and of the imperative need of reform in the administration of our criminal law. For ourselves, we see no shadow of disgrace resting upon medicine or true science from this trial. They have, and offer, competent and fair-minded observers, but if the government select, and the court approve, others to investigate and pronounce judgment in such important matters, if they allow such trifling with questions of life or death, they alone are responsible, upon them lies the disgrace.

Sifted from all this confusion of contradictory statement of opinion and bungling presentation of evidence, as given to the jury, what conclusions do the probable facts of the case warrant? Can the blood of the horse be distinguished from that of man? It was positively, though tardily, stated that some of the blood-stains were soft and flexible, and were apparently but a few days old, and that the bits of flesh found in the stable were "fresh and raw like raw meat." There is reason to believe that this opinion concerning their freshness could have been sustained by other and competent witnesses, had they been called. If this were so, we believe it would have been possible, by measurement and by direct comparison, to determine with strong *probability* the nature of the blood. We have reason to believe, even, that after drying, the corpuscles of the horse may be distinguished from that of man in many cases. We do not believe, however, that, ordinarily, any opinion, of so positive a character as by itself to warrant a conviction in capital cases, can be expressed.

The result of the trial, although foreseen by those who were acquainted with the conduct of our courts in cases involving medical and scientific testimony, has produced a strong impression upon the community, and should be made the occasion of such reforms as the administration of justice demands. 1st. The initial processes in capital cases should be so altered that the choice of the chemist, anatomist, or microscopist, upon whom rests the whole subsequent responsibility of investigating and testifying as expert, shall not be left to any police agent or coroner who may first get possession of the *corpora delicti*, but shall be determined by the Attorney-General or the Supreme Court. 2d. No person should be admitted by the court to give testimony as an expert, until he has proved his fitness for the situation by a proper education, by sufficient practical experience, and by a past record unsullied by exhibitions upon the witness-stand of gross ignorance or wilful perversion of scientific knowledge. 3d. The executive officers of the State should exercise great discretion in conferring scientific titles which carry with them a seeming warranty of high professional merit, and retain the power of taking them away for unworthy conduct or conspicuous ignorance.

How such reforms are to be accomplished, it is not easy to see. Three years ago, in view of these evils, the American Academy of Arts and Sciences and the Suffolk District Medical Society appointed a committee to consider the subject of expert testimony, and through their chairman, Hon. Emory Washburn, a bill was presented to the Legislature. It was referred to the judiciary committee, but was never heard of afterwards. The chairman of the committee on the part of the Medical Society presented a report of its views on the subject, which was published in this JOURNAL of Feb. 17th, 1870, and which we commend to the re-perusal of our readers. Had some of its judicious suggestions been adopted, the State might have prevented this last disgrace to the administration of justice.

Correspondence.

THE LATE DR. MARSHALL.

MESSRS. EDITORS,—Will you favor many of your readers and old subscribers in New Hampshire by publishing the following obituary notice of one of our best men :—

Died at Mason Village, now Greenville, N. H., Dec. 16th, 1872, Hon. Thomas Hastings Marshall, M.D., aged 66. He died of softening of the brain, after a confinement of only a few weeks from his accustomed business. Some months previous, he was thrown from his carriage, and his head was injured; and there had been noticed, from this time to his last sickness, a gradual decay of his memory and some impairment of his mental powers. He nevertheless kept on with his business till his strength became exhausted. He said to me, in a visit I made to him in the early part of his sickness, no doubt from a consciousness of the failure of his memory, "When I am practising my profession I do not know but that I can go on and do just as well as I ever did; it all follows, as a matter of course and habit. My forgetfulness does not in the least disable me from making as good a prescription as ever." This was in keeping with the judgment and good common sense of the man.

During his last sickness he was delirious most of the time, and, occasionally, he would become furious, requiring force to restrain him; but at length he sank, exhausted by his severe muscular action and imperfect nutrition.

Dr. Marshall did not have the advantage of a collegiate education, but was well fitted at the Academy at New Ipswich in such classical studies as are required to enter upon his professional course; and ever after in his life, unlike too many of our profession, who will not write, or are really incompetent, he was always ready to write on any subject or occasion, in which he could be useful, and was able, too, to do it in a scholarly manner. He commenced his studies with the late Luke Howe, M.D., of Jaffrey, and, during his pupilage, besides attending the medical lectures at Bowdoin and Dartmouth, he took one or two private courses with Prof. R. D. Mussey, M.D., LL.D., at Hanover. He ever after kept up a correspondence with this distinguished man, which was continued even when Dr. Mussey's physical strength was so impaired that he was obliged to employ an amanuensis.

Having graduated at the Dartmouth Medical College, Hanover, in 1835, he commenced practice at Fitzwilliam, but remained only for a short time, when he removed to Mason Village in September, 1837, where he spent the remainder of his life. One of his sons was the first in the town to enlist in the War of the Rebellion, and did not leave the service till, by exposure and hardships, he lost his health, which has never yet been regained.

Dr. Marshall was an active and working member of the New Hampshire State Medical Society, and always attended the annual meetings, if possible, and participated in all their proceedings. He often prepared papers for these meetings, which have appeared in the published transactions of the same. He was also a member of the American Medical Association.

He took a deep interest in agriculture, both practically and scientifically, and became a member, and was often chosen the President, of the Agricultural Societies of his County. No one could be more desirous than he to infuse into the business of farming a thorough, practical and scientific spirit, and to elevate to its proper standing this first of all pursuits.

He also held many civil offices, always being ready to serve the community to the extent of his power, in town matters, in the schools, in the church, &c. He served twice as a Representative from Mason Village to the New Hampshire Legislature, and was also chosen Senator for two years, to the same.

It must be mentioned, to his credit, that he espoused the antislavery cause early, when it was exceedingly unpopular, and boldly sustained it when it cost much to do so, even to the loss of much of his business, discarding a rigid and narrow conservatism, which would impose shackles upon his free opinions. It was enough for him to know that it was right, and thus being convinced, he left consequences to take care of themselves. But with all his devotion and loyalty to the best interests of the community, he yet made all these various matters in which he was interested and enlisted subservient to his profession; this was first and last to him as long as he lived.

The death of Dr. Marshall has been followed with the deep regret and sorrow of a large circle of friends and patrons. Those who knew him best loved him most. He was always the true man, the man of principle, of integrity and uprightness. He ministered to all alike; the sick and suffering poor received the same attention as the rich, if the case demanded it, although he knew that his services would never be remunerated in the slightest degree. He never thought of his profession in any venial point of view; it was to him a mission of mercy and safety to mankind. He could not conceive of the sordidness of the man who only thinks of dollars and cents in the practice of medicine.

All his life he devoted himself to his profession, never letting anything usurp its place; giving up all his social enjoyments, all his comforts of domestic life, all his own business and cares, to his medical duties. Nothing but ill health ever deterred him from his place, and this very rarely, although he was of rather a slender constitution, and often worked when others would have stopped, so anxious was he always to be in the line of his duty.

Dr. Marshall was a good, reliable and scientific practitioner. He had little of that hurry and despatch that characterizes so many physicians, but was always slow and deliberate in making up his mind; but when his opinions were once formed, whether in medicine or on other topics, they were reliable and worthy of confidence. In diagnosis he was generally very correct, and needed rarely to review or reform his decisions. He never made pretensions to any uncommon acuteness, but chose rather to have dulness and ignorance imputed to him, in his careful, plodding, examining, comparing and thinking, before he decidedly avowed his opinions. But he had rarely to retract his diagnosis, when his decision had been thus obtained. He had but little regard for that popular pathology and even diagnosis that most always prevails with those around the sick; he thought for himself, and if he could not direct the opinions of others, he, at least, scorned to be swayed from the right by what he knew was the result of mere caprice.

He was much esteemed as a surgeon in his locality, and was eminently successful in this part of his practice. He met all his cases of this kind with confidence, and performed many of the severer operations in surgery with entire success.

Dr. Marshall was careful and judicious in the administration of medicine, and discriminating in selecting his remedies; he knew what he wanted to accomplish, and chose his agents accordingly. He kept himself well posted in all the progress of his profession to the day of his death. He was a subscriber and reader of this JOURNAL all through his professional life. He made himself acquainted with all the new discoveries in our art; he was familiar with all the new remedies, and used them early and freely in his practice. He was a reading and reflecting man—he thought for himself and made up his own opinions.

He did not live to his profession alone, caring for nothing else; he was ready to aid in any useful project in the community; he was always a supporter of the institutions of religion, a warm friend and worker for the schools, an ardent advocate for the cause of temperance, and all measures tending to advance and elevate the public sentiment. He strove in every way to do his whole duty as a man, a Christian and a physician, and he leaves a blessed memory behind him. A. S.

Medical Miscellany.

Out of 3,665 women delivered during the past year under the auspices of the Royal Maternity Charity, there were only four deaths.

At the meeting of the Suffolk District Medical Society, last Saturday evening, a committee was appointed to devise and report some scheme by which the much needed reform in the matter of expert testimony may be realized. This action of the Society grew out of the pseudo-scientific exhibitions in the recent Alley trial.

True to his loyalty to the medical art [science?] the late Lord Lytton, in a document addressed to his legal representatives, stipulated that after death, or presumed death, his body should lie untouched three days on the bed on which he died, and that thereafter medical men should examine him to ascertain if he were really dead; and, if so, to certify accordingly. The profession will see with satisfaction that his Lordship will receive the honor of interment in Westminster Abbey.—*Lancet*, Jan. 25.

Street Accidents in Paris.—Forty-five thousand carriages circulate in the streets of Paris, including 1,200 omnibuses, 8,000 private carriages, 10,000 public cabs and hired carriages, and 25,000 carts for transport. These carriages, it is stated, kill yearly 135 persons, and wound 1,200.

The *Pall Mall Gazette* has the following from a medical correspondent:—

The medical education of women will shortly be placed upon a solid foundation in the city of Boston, U. S. A., by the New England Female Medical College being made a branch of Harvard University. Among the great Universities of the New World, Harvard is well known as the oldest, the wealthiest, and the most celebrated, so that no reason for complaint will remain to English speaking people on the other side of the Atlantic when the medical degrees of Harvard are as accessible to women as to men.

We are greatly obliged to the *Pall Mall Gazette* for this interesting item of news. It is a bit of gossip that had not reached our ears, here in Boston.

At a meeting of the Boylston Medical Society of Harvard University, held February 7th, the following was announced by the President to be the award of the Committee on the Boylston Prizes for the present year:—

First Prize to Thomas Morgan Ratch for an essay on "The Emigration of the White Corpuscle in Inflammation." Second Prize to Walter Ela for an essay on "Fractures of the Elbow-joint."

The effect of the energetic action of the new Board of Health on the smallpox epidemic is strikingly shown in the figures given by the *Boston Daily Advertiser*. We suspect the old board will be somewhat startled to see how easily the disease has been controlled by proper measures. It is, nevertheless, a result which was predicted over and over again last fall. The decline in the number of deaths for each week is indicated in the accompanying table. The last column indicates the decrease from the week preceding.

Week ended.		Deaths from smallpox.	Decrease.
December	21	69	.
"	28	63	6
January	4	60	3
"	11	56	4
"	18	46	11
"	25	35	11
February	1	42	7*
"	8	24	18
"	15	17	7
"	22	8	9

* Increase.

Cause Why.—Dr. Aveling, in his recent work on "English Midwives," says (p. 157):—"Accoucheurs are only now preferred because they have been proven to possess greater skill, greater judgment, greater mildness, greater patience and greater decorum."

BOOKS RECEIVED.

A Manual of Histology. By Prof. F. Stricker, of Vienna, Austria, in co-operation with others. Translated by several gentlemen in London, Boston and New York. Edited by Albert H. Buck. New York: William Wood & Co. Pp. 1106, with 431 Illustrations. (From A. Williams & Co.)

Fistula, Hæmorrhoids, Painful Ulcer, Prolapsus and other Diseases of the Rectum, their Diagnosis and Treatment. By William Allingham. Second Edition, revised and enlarged. Philadelphia. Lindsay & Blakiston. 1873.

NOTES AND QUERIES.

"Faults of Style."—A reviewer of Dr. Tilbury Fox's work on "Skin Diseases" in the London *Lancet*, says:—"The following sentence may not perhaps excite surprise in the United States of America, but we confess to having been somewhat startled by it; 'I don't exhibit arsenic, because, for the life of me, I don't see the reason of giving it.'"

Perhaps not; because such phrases are peculiar to *England*, and such faults in style in *Englishmen* are too frequent to excite surprise in America.

People, otherwise respectable, wear little bags of sulphur suspended from their necks as prophylactics; the Board of Health direct "disinfection of infected clothing, &c.," by fumigation with burning sulphur—can any person give a sensible reason for resorting to either practice as a means of preventing the spread of smallpox? Vesicle.

Do two positive bad smells—that of disease and carbolic acid—neutralize each other and produce a negative infection. Murray.

Pamphlets Received.—Reports of the Superintendent and Trustees of the Butler Hospital for the Insane. Providence. 1873. Pp. 40.—Transactions of the Territorial Medical Society, at its Second Annual Meeting, held in Denver, Col., September, 1872. Denver 1873. Pp. 34.—Report of the Pennsylvania Hospital for the Insane, for the year 1872. Philadelphia. 1873. Pp. 70.

Died,—In Dorchester, 24th inst., Dr. Abner Phelps, aged 93 years 5 mos. 18 days; a member of the Massachusetts Medical Society since 1818.

Mortality in Massachusetts.—*Deaths in fifteen Cities and Towns for the week ending February 15, 1873.*

Boston, 150—Charlestown, 16—Worcester, 27—Lowell, 16—Chelsea, 12—Cambridge, 30—Salem, 9—Lawrence, 6—Springfield, 6—Lynn, 8—Fitchburg, 6—Newburyport, 4—Somerville, 10—Fall River, 16—Haverhill, 9. Total, 325.

Prevalent Diseases.—Consumption, 48—pneumonia, 41—smallpox, 26—scarlet fever, 17—diphtheria and croup, 14.

The deaths from smallpox were as follows:—In Boston seventeen, Charlestown six, Cambridge two, and Chelsea one.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, February 22d, 129. Males, 66; females, 63. Accident, 3—inflammation of the bowels, 1—bronchitis, 2—inflammation of the brain, 5—congestion of the brain, 3—disease of the brain, 5—cerebro-spinal meningitis, 1—cyanosis, 1—cancer, 1—consumption, 18—convulsions, 4—croup, 1—debility, 4—diarrhœa, 1—dropsy of the brain, 4—dysentery, 1—erysipelas, 1—scarlet fever, 8—typhoid fever, 2—disease of heart, 3—infantile, 1—intemperance, 1—disease of the kidneys, 1—inflammation of the lungs, 10—marasmus, 5—measles, 1—old age, 7—paralysis, 4—pleurisy, 1—pyæmia, 1—premature birth, 3—puerperal disease, 2—stricture of urethra, 1—spina bifida, 1—smallpox, 8—disease of spine, 1—syphilis, 2—disease of stomach, 1.

Under 5 years of age, 48—between 5 and 20 years, 13—between 20 and 40 years, 30—between 40 and 60 years, 19—over 60 years, 19. Born in the United States, 98—Ireland, 22—other places, 9.

THE

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Original Communications.

ON LEPROSY, AS IT EXISTS IN THE SANDWICH ISLANDS.

By Samuel Kneeland, M.D.

During a visit to the Sandwich Islands in the summer of 1872, among other objects, novel and interesting to a physician, I was particularly interested in the asylum for lepers, situated in the outskirts of the town of Honolulu. I took some pains to inform myself, by actual observation of the patients, and also from official sources, in regard to this disease; and I send this communication, thinking it may prove of interest to your readers, to whom the subject has been occasionally introduced in your pages.

At the time of my visit there were about twenty patients in the asylum at Kalihi, the sexes being equally divided, and of all ages from over 50 to 5 or 6 years. Though some of the cases were horrible to look at, I was told that many worse ones had recently been sent to the national asylum on the island of Molokai.

The two usually described varieties seemed here to co-exist in the same person, and it seems to me that they are simply stages of one disease, either the skin or the nervous system being chiefly affected, according to the constitution or habits of the patient.

The skin of the Malay race in these islands is very dark, yet plainly exhibits the commencement of the disease. The first symptom is, in most cases, a tuberculous condition of the skin over the eyes, and on the forehead, cheeks, and chin; the skin looks as if indented with small pits, like those on the top of a thimble. After a while, the flexors of the fingers begin to contract, with loss of sensation in them, gradually creeping up the hands, with loss of the nails, and finally of the phalanges. The skin over the whole body gradually becomes affected, preventing its action, finally destroying the digestive powers, and arresting nutrition. They all said that they suffered little or no pain. All ages are affected, and all ranks of society. It is almost inseparably mixed with syphilis, which has raged like wildfire in these islands since the visit of Capt. Cook. No treatment seems of any avail, except to remedy the syphilitic taint; tonics, stimulants, alteratives, have alike been tried in vain. How it is produced is a matter of question; there is a general belief that it was brought from China; it was not known in these islands until 1848, at which time it was said to have been introduced by Chinese; and it was not noticeable as a disease of the country till ten years afterwards. There can be but little doubt that it is spread by cohabitation and inoculation of any of its diseased fluids, in the same way as syphilis; that it is incurable, and that the only remedy is segregation of the affected.

While the breaking up of families and the isolating of so many seems to be a hard alternative, experience teaches that it is the only one. There is a want of common prudence displayed by the natives that almost sets at naught the best directed efforts of medical men, and a recklessness displayed in the indulgence of animal appetites that goes far towards eliminating that pity that we are all ready to feel for these unfortunates.

A darker discoloration of the skin generally precedes the thickening, after which paleness supervenes, with shrivelling, scaliness, and insensibility. The deposit under the skin is accompanied by a general disturbance of nutrition, involving the nerve trunks; the tubercles are raised above the skin, are hard and rough, on one or both sides of the median line, and unsymmetrical. The diseased patches may occur anywhere on the body, on the trunk and limbs having a dry and scaly look, with blunted sensibility. A kind of granular tissue seems to be deposited in the fibrous textures of the integuments; in the so-called anæsthetic form, it is most abundant in the nerve tissue, while in the tubercular form it occurs chiefly in the skin and mucous surfaces, particularly the pharynx. According to Neumann, as given in Fox's and Farquhar's report on the "Endemic Skin Diseases of India" (London, 1872), "the papillary body is elevated, the cutis thickened, the normal tissue replaced by minute cells slightly expanded by acetic acid; so that in some parts there only remained a slight amount of normal tissue—the fat goes. At first it seems there are colloid cells in the corium, then aggregated colloid globules, and then the small cells infiltrate the whole cutis. Many observers believe the new growth begins about the hair follicles, and takes the form of strands. In fact, the cell-growths invade the fibrous textures gradually, to more or less defacement of them."

Leprosy is the *Elephantiasis Græcorum,* as distinguished from *Elephantiasis Arabum*—the latter being the elephant or Barbadoes leg, characterized by a hypertrophic growth of the cutaneous cellular tissue, with infiltration by a fluid rich in fibrine, the lymphatics being obliterated and the veins obstructed.

In this disease it is important to distinguish between its production and its propagation.

There is no evidence that leprosy has ever been produced in the Sandwich Islands. The usually assigned causes of the disease do not exist here. They are a cleanly and well-fed people, their fine climate preventing physical misery, and malaria not existing; they eat almost no salt food, and no grains, living principally on the taro plant, dried fish and cuttle fish, with plenty of fruits, as bananas, oranges, figs, mangoes, melons, &c., and the sugar cane. No light appears to be thrown on its origin by the habits or food of these islanders; and it has been evidently introduced, probably by the Chinese, as it may be in any climate; it is said to exist in Canada and in our Southern States. It is peculiarly prevalent in China, and we may soon expect to see it figure among the diseases of California, and elsewhere in the United States where Chinese labor is introduced. Whether it may result here, or anywhere, from alleged deficiency of nitrogen or potash in food, physiological chemistry must hereafter determine. It is most abundant about Honolulu, where the natives are the best fed. Being there, it will continue to increase, and add its share to the rapid degeneracy of this race. It is rare in the equally exposed white races, so that the natural or acquired characteristics of races may enter into the solution of this difficult problem.

The tendency of those who have never seen the disease is to believe that leprosy is not contagious; the opposite is the belief in the Sandwich Islands, the opinion of physicians there being, as far as I could ascertain, that it is contagious. The government report on this subject for 1872 asserts, most emphatically, that it is contagious; it says:—

> "Daily experience confirms this. Whole families, and those who have lived with them, member by member, becoming diseased; such being the nature of the disease, it is a terrible sight to see sometimes, on entering a native house, a leper, some relative or friend of the family, sitting among little children, and perhaps eating with them out of the same calabash, with sores on the fingers and poisonous breath. The lives of half a dozen persons are endangered by one person who should already be considered lost."

All cases that can be traced are found to result from contact with the diseased, either by intermarriage, cohabitation, hereditary transmission, or inoculation in some way. I saw, at Kalihi, a native woman, her English husband, and their son of eight years old; all three were marked with the disease, the woman, the worst case, having communicated it to the man, and also to the child.

Tradition, popular prejudice, medical experience, and legal enactments unite in the recommendation of the practice of segregating the leprous as the only means of keeping this terrible disease within bounds. The uncommonly social and hospitable character of these islanders is eminently favorable to its spreading; and their love of ease, indifference to life, and insensibility to danger aid powerfully in its propagation.

The belief in the contagious character of this disease is based upon ample observation. In the two years ending March 31, 1872, there were at the Kalihi Asylum 202 lepers—124 males and 78 females, including 26 children under fourteen years of age; and since its establishment nearly 600 cases have been treated there; most of these, as they grow worse, are sent to the National Asylum on Molokai, but 29 of the number died at Kalihi. Up to the same date, nearly 600 had been received at Molokai, of whom 200 had died, about 400 remaining there at the above date, who, sooner or later, will fall victims to it.

The following are extracts from the Report of Dr. F. W. Hutchison, Minister of the Hawaiian Islands Board of Health, for 1872:—

"As very few persons, native or foreign, are acquainted with the locality and surroundings of the leper settlement founded by the Government and Legislature of the Hawaiian Kingdom, it may perhaps be well to recall, in a succint form, the facts in regard to its situation, surroundings, and its actual condition at the present moment.

"Let us land on the southern side of Molokai, in the little harbor of Kaunakakai, take horse, ride over the gradually ascending plains in a northeasterly direction to high pasture lands, until we arrive at the edge of the famous precipice of 'Kalaupapa,' 2000 feet above the sea level. This precipice we shall have to descend, for it is the only communication by land with 'Kalaupapa' (the landing-place of the settlement from sea). A zigzag road has been cut down this nearly perpendicular precipice. Arrived at its foot, and following the trail, we soon arrive at the 'Flat,' or landing-place, where several native houses are scattered about. On an even, good road, the leper settlement is soon reached; it is large and extensive, surrounded by grand and imposing scenery. The papaia, puhala and banana plant give the village a cheerful appearance. Some of the houses are fenced in by stone walls, others are placed amongst potato fields or pasture lands. The view is generally picturesque; vegetation is luxuriant, the scenery is beautiful, and its whole appearance, apart from the lepers themselves, pleasant and agreeable.

"A little further on, the house of the keeper is reached. He has a neat, commodious house, with two rooms to himself, the other portions of the house being appropriated for stores of various descriptions, out-office for the supply of medicine, books, &c. The buildings adjoining the principal keeper's house are two hospitals (male and female) for those of the sick unable to attend to themselves—separate houses being provided for all those persons of the leper valley who require special attention in regard to diet, accommodation and medical aid—in fact, for all those too far advanced in the disease to take care of themselves.

"In the quadrangle, of which the Superintendent's house forms one side, are to be found separate houses built for boys and girls, with a special building for a school-room; an instructor for which establishment is generally to be obtained among the lepers themselves. There are several other buildings included here, useful or necessary for general purposes, and the special control of the stock and material of the establishment.

"Care is taken that the patients received here have suitable food; a number of milch cows furnish plenty of milk, morning and evening, and the food is prepared by a Chinese cook (a leper) belonging to the establishment.

"The children are taught the ordinary school instruction of the islands—reading, writing, arithmetic, geography, and singing.

"The scene presented to a stranger on visiting these school-rooms must necessarily be a sad one, yet he cannot but reflect that it is well for the country and the whole race that these young people—poisoned in their blood—are taken away from the community at large. The children, with an exception or two, do not seem to feel their misfortune; when they leave school, they act as others of the same age, running or playing on their way home, apparently unconscious of the fate that awaits them.

"A little distance from this central place, nearer the seaside, a little church has been built, where, every Sunday, a native minister, a leper himself, holds a service. It is well attended by the poor people for whose benefit it has been specially erected.

"The houses of the lepers are scattered throughout the valley. There is a stream at the head of the settlement, and a visitor will meet numbers of lepers on an ordinary fine day, some leading horses, carrying bundles of clothes in the direction of the stream; others carrying calabashes of poi (taro mixed with water), sweet potatoes, &c.—in fact, the usual life of a Hawaiian village will be seen there in its usual routine and manners.

"The houses are generally well kept and clean (much to the credit of the lepers themselves and the nurses placed over them). Included in the number of lepers are several half-castes, two or three Chinamen and one European. The females are industrious, making mats and other material for the internal comfort and accommodation of their cottages. The males, who are able and *willing* to do something, work their potato fields, raise sugar cane, bananas, &c. A great change for the better has taken place among them during the past two years.

"Fresh provisions only are issued to the lepers—five pounds of meat and twenty-one pounds of paiai (the root of the taro, *arum esculentum*, when baked resembling an insipid sweet potato—a very nutritious food) per week are the ordinary rations issued from the superintendent's department. The meat generally is mutton, but this is varied at times by fresh beef. The ration is a large one, and exceeds that issued to the soldiers of the best supplied European and American armies; nevertheless the complaint is chronic at Molokai as well as at Kalihi that sufficient food is not supplied to the patients. The Board, however, can fairly assert that these people are better supplied than they ever were in their own homes; a proof of the assertion may be found in the fact that many of these people, living at the landing place of Kalaupapa, have been anxious to make themselves lepers, and probably the whole population of the hamlet would not object to being taken under the supervision of the Board.

"Some marriages have taken place among the lepers, but sterility is the almost universal result—and it is fortunate that such is the case. Within the five years' existence of the institution, and in a population of several hundred people, only two births have been reported. The first case was born dead; the other is living now, borne by a woman who shows no signs of leprosy, but her husband, with whom she lives, is a perfect leper. Some doubts have been expressed about the paternity of this child.

"Leprosy is more common among males than females; two-thirds of the lepers in the valley are males."

According to the late Dr. Trousseau, of Paris, as stated to me by his son, whom I met at Honolulu, experiments show that the incipient stage of leprosy can be cured by destroying the skin down to the muscles by the actual cautery; and by a severe constitutional treatment of arsenic, and cantharides in almost poisonous doses, its action on the skin, and non-action as a diuretic, being secured by combining it with opium, belladonna, &c. Though the remedy is apparently as bad as the disease, it is interesting as showing from what direction, if any, a cure may be hoped for.

I have some photographs of this disease, taken from life this summer, which I shall be glad to show to any interested.

Boston, December, 1872.

Clinical Lecture.

ON DISEASES OF THE THROAT.

By F. I. Knight, M.D. Harv.

The Laryngoscope.

Gentlemen,—Every physician acknowledges the importance of physical diagnosis, and employs its methods as far as he is conversant with them. And for this reason, it may well be wondered by you why the laryngoscope, which, as its name implies, is an instrument by means of which we can view the larynx, has not been more generally introduced into practice. It has, as is well known, often been the fate of the most important discoveries in medicine to be slowly and reluctantly received by the profession, who have, on the other hand, often been excited to false hopes by the claims of unreliable observers.

Let us look at the history of laryngoscopy and see if there is any special reason why it has been so little adopted in general practice.

Numerous attempts to view the interior of the larynx had been made during the early part of the present century, some of which were entirely successful. This was specially true of those of Garcia, a singing teacher of London, who studied and described accurately the action of the vocal cords in singing, in a paper presented to the Royal Society of London in 1855.

Although Garcia's experiments were widely noticed at the time, no practitioner thought of adopting the instrument for practical purposes.

In the winter of 1857–58 Prof. Czermâk visited Vienna for the purpose of studying the production of certain guttural sounds. Here, he heard that Türck, Professor in the Vienna University, had, during the previous summer, made some attempts to examine the larynx by the aid of small mirrors placed in the back of the throat, but had given them up, and laid aside his mirrors without obtaining any satisfactory result. Czermâk borrowed the mirrors of Türck, and, having substituted artificial light for the light of the sun, which is so very uncertain during the winter in Vienna, he soon convinced himself that the laryngoscope could be made an invaluable means of diagnosis in affections of the larynx.

He at once made the announcement of the discovery of its value at one of the Medical Societies of Vienna, not claiming the discovery of the instrument, but of its practicability. He called the instrument the Liston-Garcia mirror, Liston being one of the earlier men who had employed a mirror for examining the throat. Even at this meeting, Türck does not seem to have been fully aroused to the great importance of the discovery, but implied by his remark that he thought Czermâk was expecting altogether too much from the instrument. Afterwards, however, when the importance of it did dawn upon him, he claimed the discovery, and said his investigations were only suspended on account of a want of sunlight, and that he had intended to resume them.

It is hard for a man to have *almost* discovered anything, but we must assign Czermâk the same relation to his predecessors that Morton holds to those before him who theorized about and dabbled with the effects of ether. Each made certain what was half-suspected, half-known.

Among the reasons why the art was not at once generally received, may be mentioned:—

First, The opposition on anatomical grounds, no less a person even than Trousseau, the great clinical teacher of France, claiming that the position of the epiglottis would render a view of the larynx, by means of a mirror placed in the pharynx, impossible. Türck opposed rhinoscopy on the same ground.

Second, The complication of instruments. As soon as laryngoscopy was found to be possible, all sorts of contrivances for intensifying light, magnifying the image, &c. &c., were gotten up, which distracted attention from the instrument in its simplicity.

Third, Want of opportunity of instruction in the use of the instrument, or of seeing it used. As you are aware, this clinic, which has been open only a few months, affords the first opportunity which has been offered in New England for students or any of the profession who may be interested to see the instrument applied to the treatment of affections of the throat, and our University is the only one yet, as far as we know, which gives the students a practical knowledge of the instrument, in its regular course. If it had not been for the personal efforts of Czermâk to spread a knowledge of this instrument by visiting the principal cities of Germany, France and England, and demonstrating, and giving instruction to pupils wherever he went, it is doubtful whether it might not have been again forgotten.

This instrument requires for its use that little art which it is so difficult to get by one's self, but which comes easily with a little personal instruction. It is my intention to help you all to obtain this art, but before describing the laryngoscope, I will call your attention to the preparations of the larynx, which I have before me on the table, not describing them minutely, but simply refreshing your memory with the names and relations of the different parts. Here you have a preparation of the *trachea* surmounted by the cartilages and ligaments of the larynx; the *cricoid* cartilage surmounting the trachea, in shape like a seal-ring, the seal behind with its strong ligamentous attachments to the thyroid above, viz., the conoid ligament in front, with which we have to do in laryngotomy, and one on each side attached to the inferior cornua of the thyroid; of the *thyroid* cartilage I will only remark that it is not composed, as you will find it generally described in your text-books, simply of two parts, but is really composed of three; the middle piece, which has been accurately described by Rambaud, Halbertsma, Luschka and Mandl, being usually of a rhomboidal shape, from an eighth to a quarter of an inch in breadth in different parts, composed of smaller cells than the lateral wings, not separated by any distinct fibrous tissue from the lateral parts, but its junction being distinguished by a more linear arrangement of the cells. Behind, notice the arytenoid cartilages surmounting the cricoid; notice particularly the loose capsular articulation, which permits very free rotation; notice the triangular base of the arytenoid, to the anterior angle of which is inserted the vocal cord, and to the external angle the muscles which open and close the ligamentous glottis; notice next the true vocal cords, strong, elastic bands, really duplicatures of the elastic membrane of the larynx, inserted anteriorly into the middle piece of the thyroid, and posteriorly into the anterior angle of the arytenoid cartilage on either side; notice the *epiglottis*, whose leaf-like shape you see in its entirety, as the muscular and ligamentous tissues which properly surround it have been cut away to show its attachment by a narrow pedicle to the middle piece of the thyroid.

In this next preparation, you see dissections of the muscles of the larynx. Here, behind, are the *posterior crico-arytenoid* muscles, the respiratory muscles of the larynx, which, being attached to the posterior surface of the cricoid cartilage and the external angles of the arytenoid by their contraction, rotate the *anterior* angle of the arytenoids outward, and thereby open the glottis. Here you see the *lateral crico-arytenoid* muscles which are attached also to the *external* angles of the arytenoid cartilages, but forward to the sides of the cricoid, so that their contraction rotates the anterior angles inward, thereby closing the glottis and acting as antagonists of the preceding muscles.

Here we have the *cryco-thyroid muscles* which stretch the cords longitudinally by drawing the thyroid cartilage down towards the cricoid. Now, where shall we look for the antagonists of these muscles? We have found the tensors, where are the laxors? You will find the thyro-arytenoids put down as such, but probably incorrectly. It is more likely that the *hyo-thyroid* and *sterno-thyroid*, acting together, are the antagonists of the crico-thyroids.

On this preparation, you see only the hyo-thyroid, the sterno-thyroid having been cut away; but notice the oblique ridge on the thyroid, into which they are both inserted, and you can easily imagine how their simultaneous contraction would tip the thyroid up in front if the fibres of the sterno-thyroid were inserted a little further back and the fibres of the hyo-thyroid a little farther forward on the oblique ridge. Tipping the thyroid cartilage up in front would relax the cords.

You see here the *arytenoideus posticus* connecting the two arytenoid cartilages, with its transverse and oblique fibres, whose function is probably to close the cartilaginous glottis after the anterior angles of arytenoids have been rotated into apposition and to fix these cartilages during phonation.

We have left the *thyro-arytenoid* muscles, *internal* and *external*, whose origin and insertion are implied by their name, and whose function is thought to be, certainly that of the internal, to regulate the tension of the cords by stretching them laterally.

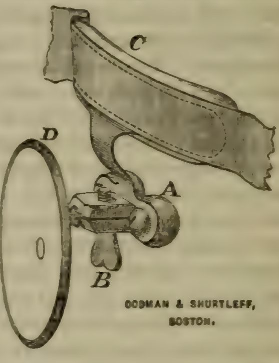
On this third preparation we will look at the larynx as a whole, considering those parts the image of which we shall bye and bye study in the laryngeal mirror. Commencing with the base of the tongue, notice its follicles, which are often more or less enlarged; next, the *epiglottis* and the ligaments, median and lateral, which connect it with the tongue, many of the fibres of the lateral ligaments running to the pharynx rather than to the tongue, thereby giving rise to a diversity in nomenclature. Notice the deep depressions on each side of the median glosso-epiglottidean ligament which are called the *valleculæ,* which are sometimes subdivided by ligamentous bands on either side, which may be mistaken for cicatrices from ulceration. The epiglottis is here quite erect and leaf-like in shape, but may physiologically be quite pendant and variously bent in at its sides. Following down the laryngeal surface of the epiglottis, you see a protuberance called the tubercle or sometimes the cushion of the epiglottis, which has formerly been thought, probably erroneously, to have some special function in the closure of the glottis. Notice the lateral boundaries of the upper aperture of the larynx, the *ary-epiglottidean folds,* which contain the cartilages of Wrisberg posteriorly; notice still farther, posteriorly, the *cornicula laryngis* or cartilages of Santorini; below, the *ventricular bands* or false cords of the larynx, separated from the true *vocal cords,* which are situated still lower, by the opening into the *ventricle* of *Morgagni.* Notice the extent to which a probe can be passed into the ventricle, which is very much more capacious than is generally supposed, extending sometimes far up towards the base of the tongue, and not infrequently serving as a lodging place for foreign bodies of considerable size. Two other favorite lodging places for foreign bodies are the valleculæ and this deep sinus, which you see on either side, bounded externally by the thyroid, and internally, principally, by the cricoid cartilage and the tissues covering them, these sinuses being called the *sinus pyriformis, dextra* and *sinistra.*

To obtain an image of these parts, which is called laryngoscopy, it is only necessary to have a bright illumination of the pharynx, and a small mirror held in proper position and at a proper inclination, by means of a long stalk or handle attached to it. This illumination of the pharynx can be obtained on a bright day by the direct rays of the sun. We place the patient in a chair facing the sun, taking our own position opposite him, and letting the sun's rays fall over our right shoulder. We then direct the patient to incline the head backward, open the mouth as widely as possible and protrude the tongue, the extremity of which, by means of a napkin, we dry and hold with the thumb and finger of the left hand, the thumb being uppermost, the remaining fingers of this hand being placed over the right lower jaw of the patient or under his chin, which gives a little better control over the patient. Then taking the laryngeal mirror in our right hand, as we would hold a pen, and having warmed its reflecting surface, so that the breath will not condense upon it, and having warned the patient that we are not going to hurt him, that he must breathe regularly and try not to swallow or gag, we introduce the mirror into the mouth, carrying it rapidly backward, keeping close to the hard palate, and avoiding the tongue, until we reach the soft palate and uvula, which we take upon the back of the mirror and push gently but firmly upward and backward.

The stalk of the mirror should be held all the time in the left angle of the mouth. If the larynx does not come readily into view, the patient should be requested to pronounce "eh," which in any event he should do when you wish to see the action of the cords during vocalization.

You may be able to obtain a good view without pushing the mirror far enough back to touch the pharynx, but, on the other hand, this may be necessary. Sometimes, and it is well to remember this, in case of very sensitive patients, a good view may be obtained by holding the mirror mid air, as it were, over the larynx, not touching even the uvula with it, but only requesting the patient to vocalize. The laryngeal mirror, wherever held, should be held firmly, and it is well, ordinarily, to rest the little or ring finger of the right hand on the face of the patient, in order to secure greater steadiness. On the occurrence of gagging, as a rule, the mirror should be withdrawn and the tongue released. You can usually, however, illuminate the pharynx more readily and effectually by means of a reflector attached to your own head; when sunlight is used it should be plane, and when artificial light is used it should be concave. They have been made to be held in the mouth or worn upon the forehead or before the eye, non-perforated and perforated.

In employing artificial light, where economy of its rays is desirable, a perforated reflector worn before the eye is preferable, and the best form which I have yet seen is that devised by Türck, which, by means of a pad for the bridge of the nose, insures a firm support to the head-band, to which the reflector is united by a ball and socket joint; none of the other head-bands give a sufficiently firm support to enable one to manipulate the reflector readily with one hand. Various special lights, with reflectors attached to them, have been invented, but are not convenient for general practice. Various forms have been devised for the laryngeal mirror, square, round and the "church-window" form of Bruns. Of these, the round is the most convenient, and should be attached directly to a straight stalk at an angle of 120 degrees. The diameter of the mirror varies from half an inch to an inch and a quarter. The most convenient size for the majority of cases is one about three-quarters of an inch in diameter.*



When it is necessary to employ artificial light, all that is requisite is a round flame, either an argand gas-light or a petroleum-oil lamp, a common German student lamp.

In a flat flame, there is hardly sufficient light. Of course, lenses will increase the intensity of your light somewhat, but are not necessary if you have a round flame. In using it, it should be put near the right ear of the patient, the reflector being worn over the right eye, which should be on a level with the patient's mouth, when his head is properly inclined backward. Having succeeded in illuminating the pharynx, the observer's head should be moved backward and forward until the focus is obtained, and then held in position a little forward or backward of this, in order that sufficient rays may be thrown into the larynx to illuminate it throughout its whole extent.

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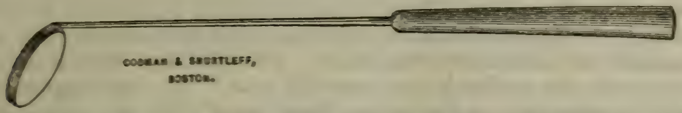
* Reflectors and mirrors, such as are described above, are now furnished by Messrs. Codman & Shurtleff of this city.



The obstacles with which you may meet, even when using the instruments properly, are:—

1. Excessive irritability of the fauces. Various means have been proposed for overcoming this, one of the first of which was the internal administration of bromide of potassium, which seems to do little if any good; which may be said, also, of the various inhalations which have been proposed, excepting that of a few whiffs of chloroform, just previously to the examination. Sucking bits of ice will also diminish the irritability somewhat. The contact of instruments, however, tends more than anything else to overcome this irritability, and when a patient shows excessive sensitiveness on the first examination, he should be directed in the interval between that and the second (if he is to come again) to touch his own throat as often as possible with a spoon or some other convenient article.

2. The rising up of the base of the tongue, which may be very thick, and so prevent the proper introduction of the mirror.

In these cases, great care must be taken not to pull upon the tongue, nor to touch it with the mirror. In exceptional cases of this kind, a better view may be obtained by not attempting to hold the tongue in the thumb and finger, but by means of a long spatula curved downward at its extremity, passed over the base of the tongue, drawing it forward and downward.

3. Pendency of the epiglottis. When the pronunciation of a high note, "E" for instance, does not raise the epiglottis sufficiently to give a view of the entire length of the vocal cords, it must be raised mechanically. This is best done by means of an ordinary elastic catheter, which is introduced by the right hand, the mirror being held, in this case, in the left. Of course, on the first trials, this will usually be borne only momentarily, but sufficiently long to enable you to catch a glimpse, at least, of the parts below. The larynx seems to be more tolerant of the material of which these catheters are made than of any other. In the earlier period of laryngoscopic operations, it was thought to be necessary or desirable to have some special arrangement for holding up the epiglottis when it was pendant, independent of the operating instrument, and here are three of the contrivances which were devised for this purpose.

Here is the ingenious instrument of Türck, by means of which you can pass a threaded needle through the epiglottis and withdraw it from the mouth, the thread then being held by the patient himself. Here is the instrument of Bruns, a strong spring forceps, with strong teeth, which, having been fixed upon the epiglottis, would hang from the mouth, and by its own weight raise the epiglottis. Here is the little staff of Voltolini, which it is intended that the patient should hold himself. The first two instruments, those of Türck and Bruns, are not to be recommended, as they are liable to produce dangerous inflammation of the epiglottis and adjoining parts, as has, in fact, already occurred. The little staff of Voltolini, which is, of course, harmless, would answer the purpose for which it was intended much better, as mentioned by Schrötter, if it were larger, thereby preventing the rolling in about it of the sides of the epiglottis, which is more likely to occur the smaller the instrument employed. But all these contrivances are unnecessary, for, as Störk has recently said,* the instruments which we use for operating in the larynx have usually the same curve as the catheter; hence a second instrument is not necessary, the operating instrument itself holding up the epiglottis.

In closing these remarks, I will call your attention to the oil pictures on the wall opposite, both executed by Dr. Heitzman, of Vienna, who has had much experience in work of this kind in the clinics of Türck and Schrötter. The first represents a section of the skull, throat and wind-pipe, when in position for laryngoscopy; the second represents the laryngeal image, as seen in the mirror, the epiglottis being above, and the arytenoid cartilages below, and the other parts in corresponding places. I call your attention to the color of the different parts in health, first accurately described, according to Mandl, by Störk; the laryngeal surface of the epiglottis (which is sometimes traversed by vessels), the cricoid cartilage (seen below the anterior angle of the vocal cords), and the rings of the trachea have the color of the mucous membrane of the eye (or, as it is sometimes described, of boiled salmon), and the arytenoids, the ary-epiglottidean folds and the ventricular bands the color of the gums (the ary-epiglottidean folds often lighter, however). The vocal cords are pearly-white in health. The mucous membrane between the rings of the trachea, more or less of which are usually seen, is of a pale red color.

(To be continued.)

PENITIS.—*(Le Mouvement Médical,* Aug. 31, 1872).—M. Demarquay has recently communicated to the Société de Chirurgie a case, interesting from its rarity, of suppuration of the *corpora cavernosa.* The patient was a man of enfeebled constitution, æt. 38 years, who had had four different attacks of blenorrhagia in the course of the previous seven years. He was admitted to the hospital April 17, 1872. Several weeks prior to his entry, he had had an attack of retention of urine, at which time he had first noticed a small swelling in the perineum, just anterior to the bulb. This swelling was found to fluctuate and was therefore laid open by M. Demarquay, but as the entire tissue posterior to the bulb was thoroughly infiltrated with pus, it was concluded that the abscess had its origin in the mucous follicles known as Cowper's glands. By the first of June, the integument of the penis had become red, tense and painful, the pain being most marked along the lower portion of the organ. On the 5th of June, the organ had attained an enormous volume, being, apparently, in a state of priapism. Death took place on the 10th. At the *post mortem,* the entire central portion of the corpora cavernosa was found to be the seat of one large abscess, which had destroyed the septum, extending to the submucous layers of the urethra.

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* Volkmann's "Sammlung Klinischer Vorträge," No. 36, p. 269, 1872.

Progress in Medicine.

REPORT ON ANATOMY.*

By Thomas Dwight, Jr., M.D. Harv.

Methods.

Preservation.—*Report on the Means employed in Medical Schools of Great Britain for the Preservation of Subjects.* (*British Medical Journal,* Oct. 5th and 12th, 1872.)

This collection of communications from gentlemen connected with fourteen institutions gives much valuable information concerning arterial injections and the preservation of specimens in fluid, in addition to that which relates to material for the dissecting-room. The points to be kept in view in choosing a method are, as is well stated by Prof. Allen Thomson, of Glasgow, "the furnishing of parts for dissection which are, as nearly as possible, of the natural appearance and consistence, and lasting during a period of several months; and, secondly, that the method adopted shall not be inconsistent (as, for example, it is when common salt is employed) with the permanent preservation, in the wet or dead state, of interesting specimens . . . . ." Several of these institutions lay in a stock of subjects months before they are to be used, and, of course, employ more elaborate methods than do the others. In many cases, the injection is made by hydrostatic pressure, i. e. by drawing the fluid from a reservoir several feet above the subject, and the process is repeated till the subject is filled to repletion. Arsenious acid and bichloride of mercury are each extensively used, but apparently not when preservation for a long time is desired. In Edinburgh, pure malt spirit or methylated spirit of commerce is thrown into the vessels, and also into the cavities of the body, and occasionally after that the body is thrown into spirits. Prof. Thomson prefers a strong solution of arsenious acid combined with alcohol, but has abandoned it on account of a tendency to produce ulcerations on the hands of the attendants. "A solution of corrosive sublimate combined with creasote and glycerine and methylated spirit" has, of late, been used in its place, but is not very highly praised. Dr. Millen Coughtrey (of the Liverpool Royal Infirmary School of Medicine) strongly favors a solution of one drachm of corrosive sublimate in thirty ounces of methylated spirit. He thinks that among other advantages it has that of making the fluids of the body less virulent, and of greatly lessening the danger of dissecting wounds. Its disadvantages concern only the injectors, who, by carelessness or excessive use, may experience "slight physiological effects of mercury." Dr. Coughtrey thinks that the preservative effects of solutions of carbolic acid, both in water and spirits, are evanescent. This agent is used, however, in other schools with excellent results. The experiments of Mr. Howse, of Guy's Hospital, with glycerine and arsenious acid were mentioned in our last report (Sept. 5th, 1872). He has substituted carbolic for arsenious acid with advantage, and uses inferior glycerine instead of the best. He has also reduced the quantity from three to two gallons, and hopes to reduce it much further. After injection, the subject is put into a coffin and packed in sawdust moistened with a saturated solution of carbolic acid in water. The results are very good after several months. Paint injections appear to be most used for showing the arteries, and wet preparations are almost universally preserved in alcohol or methylated spirits. It is disagreeable to observe that in some English schools the methods are kept more or less secret; a course disgracefully prevalent on the continent.

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* Second Semi-Annual Report.

ANATOMICAL PREPARATIONS.—*De l'Embaument chez les anciens et chez les modernes, et des Conservations pour l'étude de l'Anatomie.* Par J. P. Suguet.

This work contains an account of the methods of embalming, from the earliest times, and of the author's researches in this branch. At the end, there is a chapter devoted to anatomical preparation, from which some extracts may be of interest. Bones, after the grease has been removed, should be whitened by being dipped into a weak solution of sulphurous acid as often as is necessary, allowing them thoroughly to dry between each immersion. There is no information given as to the length of the process.

Preparations of the muscles may be made by injecting the main artery supplying the parts with a strong solution of albumen, to which is added one-quarter as much of a solution of arsenic acid of 15° (Baumé). Enough should be used to distend the tissues thoroughly, so that the muscles may appear larger than they are. The fluid will soon harden into a gelatinous mass, and in two days the part may be dissected. To keep the preparations free from the grease of the bones, a small hole should be drilled into them and the cavity injected with a very hot solution of stearine, which raises the point of fusion of the marrow. The parts are then put into the desired position and dried, by which they lose their color but retain their size and relations. The fibrous parts may then be whitened by the process just given for the bones, but the muscles must be artificially colored. Similar dry preparations may be made of the viscera by injecting with the same fluid and leaving them for two weeks in a bath of chloride of zinc at 40° Baumé, and, in some cases, repeating the injection during that time. The brain may be treated in this manner, but it will lose some of its size; it may then be whitened over a bath of sulphurous acid.

METHODS FOR MICROSCOPICAL PREPARATION.—*Tecknique Microscopique.* Par Grancher. *Robin's Journal,* Nov. and Dec. 1872.

Eine Einbetting's Methode. Von Dr. W. Flemming *Schultze's Archiv,* Bd. 9, heft 1.

Die Untersuchung's Methode des Centralnerven—Systems des Menschen. Von Prof. W. Betz. *Shultze's Archiv,* Bd. 9, heft 1.

Though containing nothing very new, Grancher's paper gives very clearly some points which it is important to remember in staining with carmine. The affinity of any part or tissue for carmine is in a direct ratio to its vitality; thus, cellular tissues are deeply colored, and the nuclei more so than the other parts of the cells. He writes that maceration in alcohol and desiccation assist coloring, while maceration in chromic acid or bichromate of potash, has the opposite effect.

The evidence, however, of the majority of observers is that if the sections be of proper thinness the effects of these reagents can be destroyed by soaking in water, to which Max Shultze recommends that a small piece of camphor be added in Summer to prevent the appearance of infusoria. Betz considers carmine the best coloring agent for the central nervous system. According to Grancher, specimens may be stained in two colors by a mixture made by pouring a little of a saturated solution of picric acid into a weak solution of carmine. The latter will affect the most active elements, as the nuclei, while the former will be more general in its action. The results are said to be superior to those obtained by carmine alone. Dr. Hertwig, in a paper on elastic cartilage (*Schultze's Archiv*, Bd. 9, heft 1), gives another method for double staining. After carmine has been employed, any excess of it should be precipitated by acidulated water, and then the specimen left for many hours in a very dilute aqueous solution of aniline blue. Writing of its effects on cartilage, he states that the cells become red, the elastic net-work blue and the ground substance remains uncolored.

Dr. Flemming's method of "imbedding" specimens of which sections are to be made has one great advantage over those at present in use. Gum or a mixture of wax and oil are commonly employed, but have the defect of being opaque so that the investigator cannot know precisely in what part of the specimen he is working. Dr. Flemming uses transparent soap, that containing no glycerine preferred, which can be dissolved, with a little heat, in one-third or one-half of its bulk of spirits of wine. The solution should be filtered and kept in a closed bottle till needed. It is solid when cold, and perfectly transparent.

Prof. Betz gives a minute account of the way in which he prepares the central nervous system for examination. The *pons, medulla* and *cord* may be treated in one piece. This is suspended in spirits of 75 to 80 per cent. rendered light brown by iodine. In from one to three days the *pia mater* may be removed, but the specimen is kept in this solution till it is infiltrated with iodine, which occurs within six days. Fresh iodine is added as the fluid becomes less colored from its absorption.

The specimen is next put into a three per cent. solution of bichromate of potash till it hardens, which is indicated by a brownish precipitate. It is then washed and kept permanently in a solution of about half the strength of the last. It is a curious fact that the roots of the dorsal nerves must be removed, while the cervical and lumbar ones may be kept.

The cerebellum is the most difficult part to prepare ; it must be very fresh and must be supported by cotton-wool. More iodine must be used, and the potash solution must be five per cent. The brain is cut in halves and treated in very nearly the same way. The sections are made with a razor which is convex above and concave below, and at least half as broad as it is long. It should not only be wet before using, but drops of water or spirit should continually fall upon it while the cut is making.

ANOMALIES.

A Catalogue of Muscular Anomalies in Human Anatomy. Alex. Macalister. *Trans. Royal Irish Academy,* vol. xxv.

Tricœlian Human Heart. By S. Messenger Bradley. *Brit. Med. Jour.*, Jan. 11th, 1873.

Note sur les Lobes surnumèraires du Poumon Droit de l'Homme. By Pozzi. *Revue d'Anthropologie,* 1, 3, 1872.

Gruber (*Bull. de l'Acad. Imp. de St. Petersbourg.)*
Sur un Muscle Tenseus de l'Aponeurose rural partant du Demi-tendineux;
Sur quelques Variétés du Muscle Palmaire Grêle;
Sur un Muscle Biceps Humeral, ayant une portion coracoidienne et une portion humerale, anomalie à la place de la portion glenoidienne;
Un Muscle radial interne long bicaudé chez l'Homme, remplacant par une portion surnuméraire le Palmaire Grèle, qui manque;
Sur les Variétés du Muscle Radial Interne Court;
Sur un Muscle Costo-coracoidienne, surnuméraire chez l'Homme;
Sur les Os du Carpe surnumèraire chez l'Homme.

Gruber gives some new cases of supernumerary carpal bones, and a *résumé* of his previous writings on the subject. He has shown that the bones may be the result of subdivision of some of the normal carpal bones, or merely distinct parts of the second and third metacarpals (especially the latter), or may very rarely be abnormal sesamoids of the back of the hand; or, lastly, may truly represent the "centrale" of comparative anatomy—a bone situated between the two rows. He claims to be the first who has recognized and described a case of the last kind.

It seems advisable to postpone the discussion of muscular variations, as the last volume of the publications containing Macalister's catalogue has not been received here. The most interesting of Gruber's papers is that on the "short internal radial" (the flexor carpi radialis brevis, or profundus of Wood), an abnormal muscle arising from the radius under cover of the radial flexor of the wrist. He has collected twenty-two cases described by himself and others, and finds that there are three varieties, according to its insertion, which is most commonly on the carpus, but may be on the metacarpus, or on both. The muscle may have a head from the ulna.

Pozzi describes an extra lobe of the right lung, coming from the lower portion and projecting to the left behind the heart. He calls this the "lobulus impar," as it corresponds to the lobe of that name found in many mammals; thus it is of a very different nature from an extra lobe at the top of the lung, due to the irregular course of the vena azigos.

The most remarkable anomaly is the tricœlian, or three-chambered, heart. It was from a child, who lived fifty-four hours, and apparently well for the last half of the time. It consisted of a ventricle, without any trace of a septum, communicating with the right auricle. The left auricle was very small, and opened into the other, but not into the ventricle. There was but one artery leaving the heart, which gave off two pulmonary arteries. The relations of the auricles and the pulmonary and caval veins were perfectly normal; but of course the blood from the lungs must have been mixed in the auricle with a much larger amount of non-aërated blood. Mr. Bradley considers this malformation the result of arrested development at about the ninth week.

Osseous System.

L. Levschin.—*Sur le Developement du Tissu Osseux dans les Extremités Diaphysaires des Os longs chez les nouveaux-nés.*
The same.—*Sur les Vaisseaux Sanguins Terminaux dans les Cavités Médullaires Primitives des Os longs, et sur leurs Noyaux Capillaires chez les Nouveaux-nés. Bull. de l'Acad. de St. Petersbourg,* Vol. 17, No. 1.

In these papers the author gives the results of his studies on two questions: First, is the medullary tissue of a long bone in process of development dependent upon the proliferating cells of the cartilages of the ends of the diaphysis; and second, how do the terminal blood-vessels of the medulla behave at this period? It should be understood that the author does not refer to the epiphyses but to the plates of cartilage closing the ends of the central cylinder. In regard to the first point, the author holds that these cartilages play no active part in the process. The cartilage cells are arranged in rows and so close together that the ground substance has the appearance of a net work of bars running in two principal directions. Now the transverse ones atrophy (apparently under the pressure from the vascular loop of the encroaching medulla), while the longitudinal ones remain to support the bony tissue and thus give the well-known appearance of the cancellated structure of the ends of the long bones. In the second part, he shows that the very minute capillaries of the growing medullary cavity are arranged in loops at its ends. The calibre of these loops is greater than that of the vessels going to form them. The walls are not regular, but present projections of various sizes, particularly in the loops. The appearances indicate that the prolongation of the medullary cavity, if not due to, is, at all events, accompanied by great activity of the vessels near the ends. Though but rarely, the author has seen grounds to infer that the walls of the capillaries were formed from spindle-shaped cells.

Dr. Wolfermann contributes an article to Reichert and DuBois Reymond's Archives [1872, heft 3], on the architecture of the bones. By means of numerous sections, he has studied the structure of the bones of man and many animals, and shows that the arrangement of the trabeculæ always presents some practical mechanical advantage.

The Sesamoid Bones in Man. By Dr. Gillette. *Jour. de l'Anat. et de la Phys.* Robin. Sept. and Oct. 1871.

The author thinks that these bones deserve more attention than has been given them. They are usually tersely described as small, round bones in tendons. He divides them into peri-articular and intra-tendinous, and is inclined to regard the latter as of accidental formation, owing to friction. Those about the joints are the most important, and the author enumerates many that are but rarely observed. He dwells particularly on the way in which they modify the joint at the distal ends of the first metacarpal and metatarsal bones. The sesamoid bones of this particular kind give protection, solidity and mobility to the joints; they change the direction of forces and give greater power to muscles inserted into them. Dr. Gillette does not consider either the patella or the pisiform as sesamoid. The only reason which he gives for excluding the former is that it is seen well formed in the embryo at a time when the acknowledged sesamoid bones are barely perceptible, for which, one would think, its greater size would sufficiently account. He thinks that the pisiform is as much a part of the carpus as the calcaneum (to which it pleases him to say the pisiform corresponds) is of the tarsus. This view is entirely at variance with the teachings of comparative anatomy; but if we consider merely the human body, there can be no doubt that the pisiform is much more like a sesamoid than like anything else.

Muscular System.

Ueber das Verhältniss von Nerve und Muskel. *Schultze's Archiv.*, Bd. 9, heft 1.

The chief object of this paper is to show the numerical relation between muscular and primitive nerve fibres. This was studied on the orbital muscles. The muscular fibres were counted in a transverse section through the middle of the muscle, and the nerve tubes in one as near the entrance of the nerve as possible. The average proportion of nerve tubes to muscular fibres in the eye muscles of the sheep is as follows:—

In the superior oblique 1 nerve fibre to 6 or 7 muscular ones.
" " inferior " 1 " " " 3 " 4 " "
" " " rectus 1 " " " 7 " 8 " "
" " external " 1 " " " 10 " "
" " internal " 1 " " " 8 " "

(For particular reasons the superior rectus is thrown out.)

This gives a general average of 1 to 6–7, but in the human orbit the proportion of nerves is even greater, being 3 to 7 muscular fibres. It is remarkable that both in the sheep and in man the external rectus has the smallest proportion of nerve fibres, as in the latter, at least, no muscle has a relatively larger nerve. (Rüdinger.)

Tergast does not accept the general view that the proportion of nerve tubes to muscular fibres increases with the higher position of the animal among the vertebrates, but holds that it depends upon the importance of the muscle. Thus, in the sartorius of a young dog, the proportion is 1 to from 40 to 60 ; but in the frog, in which the sartorius is greatly used, it is 1 to 16$\frac{3}{7}$.

The author finds in the orbital muscles that, with some exceptions, the nerves form coarse and fine plexuses, and are distributed throughout the muscle, having numerous terminations. Kühne, however, holds that in every muscle there are tracts where no nerve is to be found. The amount of labor involved is prodigious, as there are thousands of fibres of each kind to be counted in every muscle. The number of observations is, as may be supposed, somewhat limited, and it may be doubted if the figures are very reliable, as the individual variations are very great. Thus, in one case the obliquus superior had 2260 nerves to 8080 muscular fibres, while in two others there were only 1756 and 1710 to supply 15,385 and 17,658 respectively. The proportion in the eye muscles of the frog is given as 1 to 10, which is apparently obtained by taking the average of the following results of four observations, 1 to 3, 1 to 4, 1 to 13, and 1 to 21. There is another consideration which throws even more serious doubt on this work, namely, the difficulty of recognizing with any certainty the finest nerve fibres when seen only in transverse section.

The most valuable part is the appendix, in which the discovery is made public that the fibres of the eye muscles branch and anastomose like those of the heart.

Gillette writes, in *Robin's Journal*, Nov. and Dec., 1872, on the muscular coat of the œsophagus in man and animals. He divides the muscles into proper and accessory ones. The former come from the pharynx and cricoid cartilage, the latter from a number of neighboring parts. Special attention is given to the fibres coming from the diaphragm. The only new point of any importance which we find in this monograph is concerning the nature of the fibres. It is universally held that the striated fibres gradually diminish in number from above downward, and that organic muscular fibres take their place; but Gillette states that in the upper part of the œsophagus there are only striped fibres, only unstriped ones in the middle, and both in the lower, though the organic are in excess.

A thorough investigation of the subject will be necessary to establish these views in the place of Klein's admirable article in Stricker's Handbook.

Schagdenhauffen publishes an article in the same journal (Sept. and Oct., 1872) on the mechanical principles involved in certain motions of flexion and extension of the forearm.

(To be continued.)

A Case of Chloroform Poisoning. Recovery.—(*Deutsches Archiv f. Klin. Med.*, 10 Band, 3 heft, 1872).—A laborer, desiring to have a deep-seated abscess laid open, was directed to purchase an ounce of chloroform on his way home. One hour afterward, the surgeon repaired to the patient's residence and found that the chloroform had all been swallowed. When questioned, the man said that the dose had burned his tongue a little, but that he now experienced no ill effects except a desire to sleep. An emetic was at once ordered, to be followed by large draughts of milk. After a short absence, the surgeon returned and found the patient plunged in deep sleep. There was a complete loss of sensibility, and no response to any stimulus applied to the muscles, so that there was no difficulty in laying open the abscess. Respiration was now quiet and regular, the pulse full, slow and regular; the atmosphere was loaded with the fumes of chloroform. Vomiting had not yet taken place. There seemed now to be danger that the chloroform would produce some injury to the mucous membrane of the stomach, more especially since, on account of the original trouble, no food had been partaken of for several days. The patient now lay plunged in deep sleep for the next eight hours; signs of returning consciousness were then noticed, although two more elapsed before he became fully aroused. Violent vomiting now set in, and large quantities of a watery fluid were brought up, having a very decided odor of chloroform. After the vomiting ceased, he expressed himself as feeling quite as well as ever. The man had been addicted to the use of alcohol, which may, perhaps, account for the extraordinary circumstance that chloroform, which acts so readily upon the external surface of the body, produced in this case no appreciable ill effects upon the lining membrane of the stomach. It would appear from the above experiment that chloroform, when introduced into the stomach, acts more slowly, but in the end more powerfully than when inhaled.

Diagnosis under Difficulties.—The idolators of beauty, the Chinese, are forever at the feet of beings whom they adore. When any of their wives are indisposed, they fasten a silken thread around her wrist, one end of which is given to a physician, and it is only by the motion which the pulsation communicates to it that he is allowed to judge of the state of his patient. This precaution of jealousy is almost unique in its kind.—*Med. and Surg. Reporter.*

Reports of Medical Societies.

THE BOSTON SOCIETY OF MEDICAL SCIENCES. E. WIGGLESWORTH, JR., M.D., SECRETARY.

OCT. 29th, 1872.—The Society met at the house of Dr. Jeffries, Dr. Wadsworth in the chair.

Hæmatoxyline as a coloring Agent for Microscopic Specimens.—Dr. Quincy showed, under the microscope, some specimens prepared with hæmatoxyline, and asked the experience of others in regard to it as a coloring agent.

Dr. Wadsworth had found it preferable to carmine in showing capillaries and in bringing out inflammatory appearances, but hardly so good for nerve tissue.

Dr. Dwight thought that in the specimens exhibited, the nerve tissue showed better than with carmine.

Dr. Fitz had employed hæmatoxyline in the preparation of specimens previously subjected to chromic acid and alcohol. It brings out the cells in the tongue and kidney better than carmine. After twenty-four hours in a dilute solution, the cells are more sharply defined, while the intercellular tissue is not colored and may be afterwards treated with carmine. But the preparations seemed less clear and more liable to break up than carmine preparations.

Dr. Quincy thought that this sediment might be avoided by coloring to excess and then washing. He could not say that time would not turn the preparations darker.

Dr. Fitz said that with very thin sections, washing often removed blood corpuscles or other parts. He had found solutions with a certain depth of color to become darker after standing twenty-four hours. The nuclei especially of cells are better shown by hæmatoxyline than by carmine. Epithelial specimens are beautifully colored, almost like gold preparations, the nucleus and border distinct and purple.

Dr. Wadsworth had not had the same experience with the epithelium of the eyelids.

Dr. Fitz's experience had been confined to the epithelium of the tongue. Hæmatoxyline had another advantage. It colors, when concentrated, very quickly, that is in three to four minutes, and cell nuclei certainly were more rapidly colored by it than by carmine. A strong solution is made with alcohol and water.

Dr. Arnold had found that his preparations thus treated remained in good condition after a lapse of two years.

Drs. Dwight and Wadsworth confirmed Dr. Fitz's experience in regard to the nuclei.

Dr. Quincy regretted being obliged to use gas-light for the exhibition of the specimens, as they lost greatly thereby.

The Chigoe.—Dr. White exhibited, under the microscope, a specimen of chigoe or chique, found in tropical countries, and causing, by boring into the hands and feet, necrosis, chronic ulcers and gangrene of these parts, often necessitating amputation. There is but little accurate knowledge with regard to this animal. It resembles a common flea, though smaller, and its proboscis is from six to eight times as long, being, in fact, as long as its body. The female alone is said to be parasitic, in order to perpetuate the race. It bores into the lower layers of the epidermis and remains an indefinite and unknown period. Its presence then becomes apparent from the itching or smarting occasioned, and a freckle appears which, in a few days, becomes a prominent, pearly blister, rising above the skin, and we look through the epidermis upon the swollen abdomen of the animal, full of eggs which are rapidly developed. The head and feet are doubled up under the belly. According to some, larvæ are produced, but for this there is no certain authority. If the animal is left undisturbed, the eggs pass out of its abdomen and appear upon the skin like the itch insect. Their future development is unknown, as they fall off into the sand, straw, &c. The mother then shrinks and is discharged with the epidermis, by desquamation.

This specimen shows a large number of eggs and a portion of the animal. It was removed in 1869, by Dr. Forster, of Charlestown, from the foot of a gentleman who had just arrived in Paris from Brazil, where he had spent the three previous years. The length of the voyage goes to show that the development of the process is not a very rapid one. The proboscis and a part of the legs are well shown in the specimen. A portion of the cephalic and median segments is therefore the part here exhibited. None of the eggs showed embryos and very few segmentation, proving either a very long period of development or long intervals between the separate developments. After the animal has been some time in the skin it is said to establish an arterial circulation in connection with that of its host, the two diastoles and systoles being synchronous; whether it be by the attachment of its proboscis to an artery or not is uncertain.

Dr. Fitz asked the usual rate of pulsation in insects of that size.

Dr. White could not say, but added that the large body of the animal could be easily watched with a lens and thus show whether or not its circulation was synchronous.

New Method of obtaining Illustrations from Stone or Metal—Dr. Quincy explained the method employed by him to obtain lithographic drawings. A glass plate is first covered with a film. A drawing by means of tracing paper and red chalk is transferred upon the film in reverse. The plate is then placed upon a black cloth and by means of any steel point the drawing is made upon the glass by scratching away the film, the object of the black cloth being to make the lines more distinct. Lines of almost any degree of fineness can thus be made. By lifting and turning the plate to the light, the drawing can be seen as it will appear when printed, and also compared with the original drawing and more easily corrected.

Much labor may be saved in this first process, particularly if the drawings are to be diminished or enlarged, by having a negative picture made at a photographer's and transferring it directly to the glass plate without the use of tracing paper.

Messrs. Osgood & Co. transfer the drawing on the plate to a lithographic stone, the shading is done with the lithographic crayon, and the prints struck off in the usual way.

This glass plate method is somewhat different from that taught in Vienna by Dr. Heitzmann. A lithographic stone is prepared with a black surface, and the drawing transferred in the same way as on the glass plate. The lines are then made by means of a steel point *in* the stone. The time occupied in making such drawings as those in Dr. Warren's Essay on Rodent Ulcer by this method would require one week for each. The time required in making each on the glass plate was one day, thus saving much time, labor and expense.

Another very great advantage is that the glass plate can be laid aside and a stone prepared for printing at any future time, thus avoiding keeping a stone unused as well as saving the difference in space between the size of the two.

From the glass plate drawing a metal plate can be made to print with the text.

Messrs. Osgood & Co. are now prepared to make plates or prepare lithographic stones directly from clear drawings made upon Bristol-board with black ink.

The cost of the metal plates is forty cents the square inch.

In reply to Dr. White, Dr. Quincy said that direct photographs of microscopic specimens could not be so well used, since everything was represented upon the same plane.

Dr. Blake mentioned that the photographs in Rüdinger's Atlas of Sections of the Eustachian tube were perfectly clear and good.

Dr. Dwight said that these were, however, for very low powers; e. g. fifteen diameters.

Through the politeness of Dr. N. Thomson, of Philadelphia, in sending to Dr. B. Joy Jeffries his apparatus for demonstrating and using Scheiner's test in the selection of glasses for myopia, hypermetropia and astigmatism, Dr. J. was enabled to exhibit and explain the experiment and its very practical clinical use.

TRAUMATIC RUPTURE OF THE INTESTINE.—(*Vierteljahrschrift f. Gericht Med.*, Bd. xvi. H. 2).—Dr. Laudahn reports a case in which an idiot, an inmate of the Göttingen Insane Asylum, received a kick from a fellow-patient in the right groin, directly above Poupart's ligament, the only visible effects of which was a slight contusion. Complaint was made, however, not long after, of pain in the abdomen, and it was found upon examination that the injured part was extremely sensitive to the touch. The patient soon became restless and anxious, and, twelve hours after the reception of the blow, died, with the usual symptoms of collapse. There was no vomiting after the injury; no movement of the bowels, nor were there any indications of meteorismus. The autopsy revealed the presence of ingesta in the abdominal cavity, an abundant exudation covering the folds of the peritoneum, and miliary tubercles in the spleen and liver. Finally, a perforation was discovered in a loop of the small intestine (ileum), found lying in front of the spinal column, immediately above the sacrum. The perforated spot had the appearance of a line, five mm. in length, running parallel to the long axis of the intestine. No other injury to the intestine could be discovered. This case is remarkable from the fact that a blow so light as to produce but a slight injury to the superficial integument, should cause a rupture in a portion of the intestine removed by a considerable distance from the direct seat of the blow, the intestine not being distended at the time with food. Cases of traumatic rupture of this kind are, as a rule, the result of a violent force applied to the abdominal wall, when the intestine is filled with food, or else it is found that the injured organ has been weakened by some pathological change.

WINGED MEN.—A very ingenious pseudo-scientific article has recently appeared in the *Révue des Merveilles Scientifiques,* purporting to be from the pen of M. Harnois-Condamine, a professor of physiology, and as it apparently corroborates the theory advanced by Mr. Darwin, it has stimulated a great variety of speculations and criticisms on the part of the French journals. The article in question begins with a descriptive sketch of a family living in Auvergne, the members of which are all remarkable for certain abnormal anatomical developments, consisting of greatly enlarged muscles of the trunk and upper extremities, combined with abnormally large clavicles and scapulæ, and a pigeon breast. A careful examination, *post mortem,* was made of one of this family who died lately, and the detailed results of this autopsy are recorded with an unnatural minuteness and accuracy. The dissection of the region of the shoulders appears to have been the most startling in its results to those present. The clavicle was found to be long and nearly straight, and at least a third larger in diameter than the corresponding bones of the largest men. The scapula was bounded by layers and bundles of large muscles, and was nearly twice as long as the average scapula, being also thicker and rougher on the edges than is usual. The sternum extended to within half a decimeter of the umbilicus, and was more than proportionally widened. The pectoral and intercostal muscles were enormously developed, especially the intercostales interni. The reader is artfully left to infer that these abnormal appearances all point in one direction, indicating a new departure towards another type; that is to say, the evolution of a new species furnished with wings. The lengthening of the scapulæ and clavicles, the very great enlargement of the pectoral, dorsal and abdominal muscles, all these circumstances, he argues, concur in indicating a change from the human and toward the bird type. He proceeds to unfold the principles upon which this evolution may actually be accomplished, and expresses the opinion that this new race may possibly be developed within the present generation. With the view of ascertaining how far these abnormalities were really transmitted in the different members of this family, the writer examined a young son of the deceased, and had the satisfaction of finding the frame and muscular developement of this last descendant to be the counterpart of the father. What is most striking of all, however, several new features were discovered, indicating that the son had approached nearer by several degrees to the bird type than the father. These new abnormalities are described as rudimentary *third eyelids,* and what bore a close resemblance to *rudimentary wings,* the latter consisting of a triangular flap of skin, forming a continuous connection between the upper portion of the arms and the back.

With the exception of one or two blunders indicative of an imperfect acquaintance with pathology, the article is very skilfully put together, so as to deceive completely the general public, for whom it is intended, and is strongly suggestive of a somewhat similar hoax once perpetrated by our countryman Mr. Poe.

PATHOLOGY OF PEARLS.—According to the *Lancet* those pearly concretions found attached to the inside of mussel shells, and generally attributed to Nature's method to relieve the irritation of foreign bodies, have been found by Mr. Garner to be due to the presence of minute entozoa (a species of *distoma*) in sea-shells, and an acarus (*Atax*), or itch insect, in fresh-water mussels.

Correspondence.

FROM BERLIN.

MESSRS. EDITORS,—Berlin is crowded to excess this winter, and the high price of lodgings in consequence, has driven a considerable number of students from the University to smaller places. There are still something over 2000, and in the medical department the clinics are all well attended. The number of American students is not large, perhaps a dozen, as Vienna still offers greater attractions in the way of short, private courses.

But it is here a very mild, unhealthy winter, and the amount of interesting material at the Charité was never greater. At the Pathological Institute, Virchow has much more than he can dispose of in the two mornings in the week on which he lectures, and he as well as his assistants, appear to be so hurried, that one is not likely to receive much individual instruction in the laboratory; so, apart from the great number and variety of morbid specimens to be seen here, a smaller university, say Leipzig or Wurzburg, would, perhaps, afford better opportunities for pathological and microscopic studies.

The same is not true in the clinical department, and the variety of cases exhibited, by Frerichs especially, and his powers in differential diagnosis, make his clinic at present unequalled by anything in Germany. Much as we hear of the superiority of German medical education, and unquestionable as it is in some respects, the students who are called up at these clinics make a pretty poor show. For, either from over-awe of the professors or ignorance, they rarely make the diagnosis, though they always have an opportunity of examining the cases before hand, and are frequently unable to answer questions which one of our third year's students would be apt to know. However, the professors seem to take considerable satisfaction in solving their own conundrums, and from long experience do it very well.

This winter, there is a severe epidemic of relapsing fever (famine fever, typhus recurrens), which is also now prevalent in London, and the same which visited New York a year or two ago; characterized by repeated occurrences of high fever at intervals of several days, during which the temperature is normal. Enlarged liver and spleen, frequently with chest complications, sometimes suppuration of the parotid gland and internal otitis. Persons attacked are usually debilitated from want of food. The mortality in the New York epidemic was small, 2 or 3 per cent. Here, it is greater, about 8 per cent., much the same as in typhoid, which is also fearfully prevalent this year, perhaps owing to the wretched drainage.

In the treatment of both diseases, much reliance is placed in cold water baths, an addition to rational therapeutics, in febrile affections, which after ten years of trial, appears to be now pretty generally adopted throughout Germany; but I have never heard of its being fairly tested in American hospitals. Under this treatment, the rate of mortality in typhoid is stated by different observers at from 3 to 8 per cent., while with us it is probably not less than 15, a difference which can hardly be due to our having a severer type of the disease to deal with, as the death rate was formerly much higher here.

Without entering too much into details, the method of administering baths is as follows: Whenever the temperature rises to 103° F., the patient is put into a bath at about 90°, and cold water added until the temperature of the bath is reduced to 70° or thereabouts, the patient remaining in the water until chilled, usually a quarter of an hour or more. At the same time water at a temperature of 50° may be poured over the head and shoulders every two or three minutes, and the patient is rubbed with the hands. In the cases of delicate persons, old people and children, the temperature and duration of the baths are modified, and sometimes they are omitted.

As the baths are repeated from 4 to 6 times daily, oftener if necessary, the treatment is troublesome, and requires the constant attention of a certain number of well-trained and reliable hospital servants, which would perhaps be the greatest difficulty with us. The chill which follows the bath in some cases does not usually require any interference and soon passes off, but undoubtedly there are instances, though rare, in which the temperature falls below the normal standard, and apparently the patient does not rally from the depressing effect of the bath. But, if the fatal result in typhoid fever is due, in most cases, to the exhaustion attending the long continuance of an abnormally high bodily temperature, also that more than 50 per cent. of the cases in which the temperature rises to 106°, and all in which it goes above 107°, die, and, at the same time, a cold bath reduces the temperature two or three degrees, without ill effects in the vast majority of cases, then there is some ground for the enthusiastic statement of Dr. Brand, of Stellin (who first advocated the cold water bath treatment in a monograph on the subject in 1861), that quinine is no more a specific for intermittent than cold baths, properly regulated, for typhoid. Dr. B. reported 170 cases in 1868, with no deaths.

It should be stated, also, that during the intervals between the baths, cold compresses, frequently changed, are applied to the breast and abdomen, and ice-bags to the head. With regard to diet, stimulants, &c., the treatment is the same as ours.

When typhoid fever is such a scourge as it is with us, and there is a reasonable probability that any modification of our method of treatment would make a considerable difference in the proportion of deaths, it is certainly worth trying; but it takes a long time to try such a system thoroughly, with a view to comparative results, and it can only be done in hospital wards.

It is not so easy to see the advantage of the empirical use of mercurials still so customary in many diseases. For instance, what is the indication in cerebro-spinal meningitis, which calls for mercurial inunctions every two hours? I ask for information, as I had never heard of it before, but the case got well.

Dislocated hips are still reduced by the old method with pulleys, but Hirschwald is soon to publish a German edition of Dr. Bigelow's work.

Hartnack is making his microscopes at Potsdam, but there are one or two other makers now recommended as cheaper and equally good. For 42 thalers, one can buy an excellent instrument, magnifying up to 500 diameters, and they are in very general use. Yours truly, * * * *.

Berlin, Jan. 25th, 1873.

CAUSATION OF DISEASE.

MESSRS. EDITORS,—If we may believe the London *Medical Times and Gazette*, the theory that "typhoid fever might originate with filthy air and water *de novo*," is about abandoned in England, while another theory that it "depends on a special organic poison, as much a poison *sui generis* as that of smallpox or syphilis, and that without the introduction of that poison the fever does not arise, although water, air and surroundings may be all contaminated with impurities, and may offer the most favorable conditions for its reception and spread," is continually receiving new strength. The idea that the "special poison" is cast out of a patient in the dejections and taken into the stomachs of others in drinking-water, is almost too much for full credence, though it is said that "the direction in which the evidence points is unmistakable." As an instance of this evidence, it adduces a second case in a house where a patient died four weeks before; and asserts that "the interval that elapsed between the first and second cases is reasonably accounted for on the supposition that the excreta of the young woman who brought the disease had escaped from the privy, and, percolating the soil, had found a way into the surface well."

What would be thought of a court of justice that relied upon such "evidence" as this?

Another instance of "hasty conclusions from scanty premises" appears in the same journal from a report, the week before, of Government Inspector

Ballard, who "stated that there could be no doubt that the fever had been imported to Moseley by the use of polluted milk supplied from Balsall-heath. The pollution might have arisen through a person suffering from the fever using a water-closet on the premises of the milkman. He advised the Board to appoint a medical officer of health." Why not abolish water-closets and sinks, and cork up the patients, as was once advised in cholera cases!

The following remarks, from the *British Medical Journal* of the same date, on the Influence of Rain on Health, are recommended to the thoughtful consideration of those who are so ready to rush to such secondary causes of disease, no matter how far-fetched.

"Even that terrible exotic epidemic, cholera, makes less mark in the annual mortuary returns than many of us imagine. If we compare the annual average death-rate of England, which is 22·3 to every 1,000 persons living, for the last thirty-three years, from 1838 to 1870, with that of individual years, we shall find that the cholera years do not so far outstrip some other epidemic years as the gigantic numbers recorded during the epidemic would lead us to expect. For instance, in 1847 the death-rate was, of males 25·4, of females 23·8. During the cholera years, 1848–49, it was 24·8 in males and 23·3 in females, actually showing a mean mortality (=24) less than before the invasion of the epidemic. Again, the cholera year 1854, when the death-rate was, of males 24·4, of females 22·7 (=23·5), has been surpassed by other years—for instance, by 1864, when the death-rate equalled 23·8. Thus it will be seen how little dependence ought to be placed on the annual returns when estimating the effect on the public health of any excess or defect either in rain, wind, temperature, thunderstorms, or any other sub-aerial meteor."

X.

MESSRS. EDITORS,—Allow me to assure Dr. Cotting that I had no difficulty in understanding his article and fully appreciating the philosophy of the cure. His description was clear and definite, and I usually understand what I read. I did not intend to deprive him of the credit which is his due; but only to say what my experience with the identical operation had been. I confess, however, that, after ample expérience, I fail to see the *barbarity* of removing one quarter of the width of the nail and matrix; it is accomplished by as delicate dissection as that which removes "all the diseased parts together with quite a large piece of the sound flesh, skin deep, from the side of the toe." It heals, also, as quickly. To call it "barbarous practice" is simply absurd.

Chicago, February 11, 1873. MOSES GUNN.

MESSRS. EDITORS,—In the Boston Medical and Surgical Journal, April 11, 1872, I gave an account of Mrs. H., who had used in the four years ending Feb. 14, 1872, 24 ounces of morphiæ sulph., by hypodermic injections. In the year ending Feb. 14, 1873, there has been injected under the skin of this lady five and three eighths ounces of morphiæ sulph. I cannot see that her condition has changed from what I stated last year.

Cambridge, Mass. ROBERT M. OTIS, MD.

NEW REMEDIES AND THEIR VALUE.—The *Pharmaceutical Journal* of January 4 summarizes the therapeutic novelties of the past year as follows: "Cundurango has rapidly declined in favor, and a recent report is very unfavorable as to its value in cancerous affections. Eucalyptus, samadera bark and kokoon bark, koegood, boldo, vandellia, diffusa, quarana and Japanese wax, Dugong oil and bullock's blood, xylol and sulphydrate of soda, monobromide of camphor, picrate of ammonia, and aconitine and digitaline in a crystalline form, may all be classed under this category. Phosphorus has received an unusual share of attention of late. Combinations of oleic acid with metals have also been recommended. Interesting and favorable reports have been published of the cultivation of cinchona in India, Jamaica and Java, and of ipecacuanha in India; while another Indian grown drug, opium, has now to compete with that grown in China, Persia, Australia and the United States."

Medical Miscellany.

THE population of Italy is increasing at a satisfactory rate. At present, France is the only country whose population is not on the increase. A nation becomes impoverished by remaining stationary.

IN BERLIN, the *cigar ends* usually bitten off and thrown away are collected and sold to snuff makers. Last year 800 pounds of tobacco were thus collected, and the proceeds distributed among 30 orphan children. It takes 6000 ends to make a pound.

CAMEL-HAIR BRUSHES FOR THE CLEANSING OF WOUNDS.—At a recent meeting of the Clinical Society of London, Mr. Callender brought to the notice of the Society the methods he had adopted in his wards at St. Bartholomew's for the dressing of wounds. By the use of brushes, the cleansing of a wound is not a painful process. A further recommendation is that the employment of sponges and other materials commonly used for cleansing wounds, and which some surgeons believe to be a frequent cause of the passage of infectious material from one patient to another, is thus done away with.

FACTORY LEGISLATION IN FRANCE.—*The Lancet*, Feb. 7, 1873, states that in the Corps Legislatif it has been carried that no boy under thirteen and no girl under fourteen shall be employed in any factory for more than six hours a day, including an interval of rest. Another clause in the law enacts that no male under sixteen or female under twenty-one shall work in factories at night. Formidable industrial interests, and the contention of some members that to shorten the hours of child-labor would be to encourage vagabondism, failed to arrest the progress of a measure which will do much to check the physical deterioration of the French.

THE twenty-fourth annual session of the American Medical Association will be held in St. Louis, Mo., May 6, 1873, at 11 A.M.

Physicians desiring to present papers before the Association should observe the following rule :—

"Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the Secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the Secretary, to whom such papers are sent, to examine them with care, and, with the advice of the Chairman of his Section, to determine the time and order of their presentation, and give due notice of the same."

WM. B. ATKINSON, M.D.,
Permanent Secretary.

THE TRANSFUSION OF BLOOD.—The Transfusion Committee, appointed by the Obstetrical Society of London, has adopted the following programme of its aims and objects :—

1. To collect evidence from gentlemen who have had experience in cases of transfusion.
2. To obtain the particulars of all recorded cases (performed on the human subject), with the view of finding out, as far as possible, to what extent the so-called successful cases were due to transfusion.
3. To examine the various kinds of instruments used in both the mediate and immediate forms of the operation.
4. If considered necessary, to institute further experiments for the purpose of determining how far transfusion may be relied upon as a means of saving life, and also the best mode of performing the operation.

The Committee will be happy to receive communications on the subject, which should be addressed to the honorary secretary, Dr. Madge, at the Society's Library, 291 Regent Street, W.—*London Medical Record.*

AT a meeting of the Surgical Society of Ireland (Dublin), held Dec. 13th, the question of the relative value of ether and chloroform came up for discussion. After many of those present had taken part in the debate it was finally voted that a committee of gentlemen, representing the several hospitals of Dublin, be appointed to inquire into the subject, to tabulate accurately all the figures and details connected with it, and report on the subject to the Society next year. The committee to whom the subject was referred consists of Drs. Morgan, Jacob, McDonnell and Macnamara, with Mr. Richardson and Mr. Tufnell.

NOTES AND QUERIES.

"HOW SHALL WE REFORM THE AMERICAN MEDICAL ASSOCIATION?"—"While the journals differ in their plans for improving the Association, all agree that the Association as now carried on does not represent American science, and the best men everywhere seem to be anxious that something should be done to redeem ourselves before the world."

Thus saith the *New York Medical Record*; but it adds, "the radical and original proposition made by the Boston Medical and Surgical Journal does not meet with our approval."

Of course not; but the writer of that plan and his associates have no selfish interest at stake in the matter, yet clearly see that nothing less radical will save the profession from further disgrace, to say nothing of plans to "redeem ourselves." That "proposition" may be found in the Boston JOURNAL, July 25, 1872, p. 68, and the attention of all *truly desirous* to re-form the Association is earnestly called to it. The "proposition" can doubtless be improved upon in minor details; but none of the expedients in choice of committees, examination of members, and the like, hitherto advanced in other quarters, can avail, even if practicable. A thorough re-formation is needed. RADICLE.

FUMIGATION.—"Vesicle" and "Murray" (*Gemini?*) should not be faithless, but believing. To be sure, among the latest authorities, Dr. Cameron speaks of the "real use of atmospheric disinfectants" as follows:—"As people cannot comfortably breathe in a room which has just been disinfected by sulphurous acid or chlorine, they are obliged to open doors and windows to admit the fresh air. In this way the use of the disinfectant is to be commended, because it obliges people to ventilate their apartments."

And, Dr. Wanklyn says:—"As was insisted upon in the pages of the *Lancet*, we cannot disinfect the atmosphere without, at the same time, rendering it unfit to breathe, and therefore the employment of atmospheric disinfectants is useless; for if we have to get rid of the air of a room, why should we waste any chemicals upon it before sending it out of the window?"

Again, in the *London Medical Record*, "Volatile disinfection—a practice which rests, in fact, upon a misapprehension."

But such authorities, and common sense, should be disregarded; what are they to the dicta of VOX POPULI.

MESSRS. EDITORS,—Will you please inform me where I can obtain physicians' prescriptions and druggists' labels in Boston. L. H. L.

MORTALITY IN MASSACHUSETTS.—*Deaths in sixteen Cities and Towns for the week ending February* 22, 1873.

Boston, 129—Charlestown, 16—Worcester, 25—Lowell, 20—Milford, 7—Chelsea, 10—Cambridge, 17—Salem, 10—Lawrence, 8—Springfield, 4—Lynn, 14—Gloucester, 7—Fitchburg, 2—Newburyport, 5—Somerville, 3—Haverhill, 3. Total, 280.

Prevalent Diseases.—Consumption, 39—pneumonia, 25—smallpox, 16—scarlet fever, 13.

The deaths from smallpox were as follows:—In Boston eight, Chelsea two, Lawrence two, Salem one, Lynn one, Gloucester one, and Charlestown one.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, March 1st, 180. Males, 92; females, 88. Accident, 8—apoplexy, 3—inflammation of the bowels, 3—disease of the bowels, 1—bronchitis, 4—bronchocele, 1—inflammation of the brain, 2—congestion of the brain, 2—disease of the brain, 9—cancer, 1—cerebro-spinal meningitis, 5—cholera infantum, 1—consumption, 22—convulsions, 5—croup, 6—debility, 5—dropsy of the brain, 7—diphtheria, 1—exhaustion, 2—erysipelas, 1—scarlet fever, 15—typhoid fever, 3—fever, 1—disease of heart, 5—hæmorrhage, 1—disease of the kidneys, 5—disease of the liver, 2—laryngitis, 1—congestion of the lungs, 4—inflammation of the lungs, 10—marasmus, 3—old age, 6—paralysis, 5—pleurisy, 1—premature birth, 4—peritonitis, 1—puerperal disease, 5—rheumatism, 1—scrofula, 1—smallpox, 11—suicide, 2—teething, 1—whooping cough, 1—unknown, 2.

Under 5 years of age, 63—between 5 and 20 years, 27—between 20 and 40 years, 39—between 40 and 60 years, 21—over 60 years, 30. Born in the United States, 130—Ireland, 36—other places, 14.

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Original Communications.

WRITERS' CRAMP, OR SCRIVENERS' PALSY.

By Reuben A. Vance, M.D., New York.

Writers' cramp, or scriveners' palsy, as it has been differently designated, is a disease which incapacitates those suffering from it, for the performance of the special and complex movements which are necessary for the act of writing, without implicating the muscular strength, or impairing the ability to execute any other movement whatever. The pain and spasmodic contraction which ensues upon any attempt being made to write, does not occur when the affected part is called upon to perform any other action, however complex. It is not peculiar to writers alone, but occasionally manifests itself by affecting the ability to perform coördinated and special movements in those habituated to other employments. Thus, the performer on the piano may find himself unable to strike the proper keys on that instrument, while his muscular strength in other respects may be intact. Hammond relates the case of an engraver who could perform every other movement, but could not guide his burin.* Reynolds saw a mason in whom this disease prevented the use of a trowel in his trade.† Some years since I had a patient who could perform every duty required in a printing office, but set type; when that was attempted he would be seized with spasm in the muscles of his right hand and forearm, though prior to the advent of the disease he had been a very skilful compositor. The peculiar character of the disease is manifested in its disposition to implicate those movements which have been acquired by education.

1. A gentleman twenty-nine years of age, connected with the city government of New York, consulted me in January, 1871, for an affection of the right arm and hand, which had developed itself several months previously, and had advanced so rapidly that it was with great difficulty he could then sign his name. Upon attempting to write, the fingers closed spasmodically, and the point of the pen was driven into the paper. If he was pre-occupied, or was not paying special attention to what he was doing, he could succeed much better, but in any event, spasm would ensue sooner or later. The first

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* Hammond, Diseases of the Nervous System, page 713.

† Reynolds, System of Medicine, article "Writers' Cramp," vol. 2, page 286.

symptom he noticed was a dull, heavy, but not painful sensation, in the ball of the thumb. His handwriting changed markedly, became irregular and occasionally illegible. Spasmodic contractions soon followed, and he was compelled to abandon all attempts at writing. When he endeavored to write his name in my office, the fingers closed, the hand was flexed upon the wrist, and the attempt had to be abandoned. Yet a few moments subsequently he found no difficulty in taking the same pen and paper and making a number of sketches. The æsthesiometer showed that tactile sensibility was unimpaired, and his muscular strength was very great. He was a skilful performer on different musical instruments before this affection manifested itself, and he was quite fearful lest his musical acquirements should suffer in the same manner as his power of writing; yet, no such result ensued. This gentleman was enjoined to abstain from writing for several months, and the sixtieth of a grain of atropia was injected hypodermically, three times a week. At the expiration of two months, circumstances compelled him to resume business, and since that time he has had no return of the disease. He received in all, about twenty injections.

2. A patient who had suffered from right hemiplegia, ultimately recovered to such an extent as to resume his former employment as a clerk. For two years he succeeded in performing his duties satisfactorily, when he discovered that after his day's work was done, his right hand was painful and tremulous. Soon afterwards, all the typical symptoms of writers' cramp were developed, and he was compelled to resign his position. This gentleman was forty-seven years of age, when paralyzed. From the history of the case the cerebral lesion was undoubtedly hæmorrhagic, though the amount of damage inflicted was trivial. There was complete recovery so far as the movements and sensibility of the arm were concerned, but slight dragging of the foot could be observed in walking. There were no secondary muscular contractions, and no apparent mental impairment. For the relief of the spasms, electricity had been employed, but without benefit. I administered three injections of atropia (the sixtieth of a grain at a time), but the patient passed from under my observation and I knew nothing of the subsequent history of the case.

3. Another gentleman, who had been engaged in clerical work, came under my care in the spring of 1872. He stated that in 1865 he began to suffer from spasms in the muscles of the hand and forearm whenever the act of writing was first commenced, but that by persistent effort he was able to continue at his business for several months. Finally, no amount of determination could overcome them, and he left the city temporarily and visited his parents in the western part of the state. He there learned that an elder brother living in Saint Louis, Mo., was affected in the same manner, and, failing to obtain relief, had been compelled to abandon all attempts to write.

In the autumn he returned to the city and resumed his former employment, the disease not manifesting itself again until about a year before I saw him. As before, the spasmodic contractions were slight at first, and for some time could be controlled by an effort of the will, and generally came on early in the morning when writing was first begun. Ultimately they extended to the arm and shoulder, and the attempt to write was followed by painful spasm in the hand and forearm, the fingers were flexed upon the hand, the hand upon the wrist, and the forearm upon the arm, while the elbow was forcibly drawn against the side. Mechanical devices, such as bandaging the wrist and strapping splints to the arm, were resorted to, but were without efficacy. Various kinds of pens were employed, but the result was always the same. Writing was abandoned for five months; but almost immediately it was resumed, the spasms returned as violently as ever. He now observes that a spasm of the right arm was followed by tremor in the muscles of the left arm, and general bodily exhaustion. No attempt at writing had been made for several months before he came under my care. At that time, there was no defect in sensation in the arm or hand, the muscular power was unimpaired, and voluntary acts of all descriptions, with the one exception, could be performed as readily as ever. He could take a pen and trace all the letters of the alphabet, and by forming the letters in Roman capitals, could print sentences without inconvenience, yet the slightest attempt at writing in the ordinary manner brought on the convulsive seizures just described. The treatment adopted in this case was the hypodermic injection of the sixtieth of a grain of atropia, three times a week. At the end of the first month,-an equal quantity of strychnia was added to each dose, the formula employed being as follows:

℞ Atropiæ sulphat.,
Strychniæ sulphat., āā gr. i.;
Acidi sulph. dil., q. s.;
Aquæ ad. ℥ i.;
M. Dose, eight minims.

Three months elapsed before any change for the better occurred. He then found that the attempt to write did not excite the spasms as formerly, though they still came on when the act was continued for any length of time. Treatment was continued about six months, when he again resumed business, not completely cured, but in such condition that he could write several hours daily without inconvenience.

4. In another case that I saw casually, the patient had, for many years, been in the habit of writing from six to ten hours daily, and the first indications of the disease came on when working more than usual. It was essential that certain books should be copied in a certain time, and the labor devolving on him, he was compelled to

write until very late, for a number of weeks together. Before the task was completed, he began to suffer from spasm of the hand, and this so impaired the appearance and legibility of his writing, that he was compelled to abandon it. He then discovered that the execution of the muscular movements involved in writing was almost impossible, the attempt, even, resulting in painful and irregular spasmodic contractions. There was no swelling of the hand, and he could execute any other movement with his accustomed facility. At the time I saw him, he had abandoned business temporarily; and, under the advice of his physician, was endeavoring, by rest and relaxation, and abstinence from writing, to recover his former power.

5. At the suggestion of this gentleman, a friend, who occupied a position in a bank, called at my office in September, 1872, to consult me concerning a somewhat similar difficulty from which he was suffering. About a year before the time I saw him, he noticed that any attempt he made to accelerate his speed in writing, resulted in a contrary manner. In the same way, when his attention was in any manner directed to the act, he found that writing was impossible. There was no pain, no spasmodic or involuntary contraction, and no change in the character of his hand-writing, but the direction of his attention to the act he desired to perform, rendered its execution impossible. This continued several months, and he then noticed that when he wrote continuously for any length of time, he experienced an unusual sense of fatigue in his right hand, especially marked in the ball of the thumb; this was quickly succeeded by spasms of the muscles of the hand, and ultimately in those of the arm. He finally was compelled to abandon all attempts at writing, and was assigned to other duties by the officials of the bank. At the time I saw him, he was greatly improved. Since he had ceased writing he had experienced no inconvenience whatever, and the sentences he wrote at my request were not characterized by any of the peculiarities so apparent in the writing of those suffering from this disease. He said that as it was not necessary for him to do so, he did not intend to attempt to do any amount of writing again for at least a year.

6. A lawyer practising in Eastern Pennsylvania, began to suffer from writers' cramp in 1869. He ascribed the disease to prolonged over-exertion in writing. The spasms were preceded by severe pain shooting along the inner side of the right forefinger, tremor of the muscles of the right forearm, and great exhaustion, succeeding the act of writing. The spasmodic contractions developed suddenly, and from the time of their first occurrence, completely prevented writing in any form. Various plans of treatment were resorted to; a seton was inserted in the back of the neck, blisters were applied to the spine, and the arm was showered with cold water. No relief was obtained from these measures, however, and having been advised to use electricity, he came to this city to have it applied. Electrical

treatment, such as he received, likewise proved inefficacious, and after an unsuccessful trial of the movement cure, he came under my care in November, 1871. The characteristic symptoms of writers' cramp were all present; the act of writing was impossible, yet all other coördinated movements could be executed without difficulty. Treatment speedily gave relief in this case. After the second injection of atropia he could write his name as formerly, and had copied several sentences before any spasmodic symptoms were manifested. Fifteen injections were administered while he remained in New York, and the improvement was so marked that he was able to return home and resume business. A year subsequently, I again saw him and learned that he had had no return of the disease, and that as a precautionary measure he wrote as little as possible. One sixtieth of a grain of atropia was used at each injection.

7. A young gentleman whom I saw recently in Ohio, informed me that after prolonged over-exertion in writing he began to suffer from pain and cramp in the right hand and arm, coming on spasmodically whenever writing was attempted. The part first implicated was the thumb, and the pain was referred to the joint. The forefinger, the ball of the thumb, and the forearm were implicated in succession. At the present time, the attempt to write causes these spasmodic contractions, and after it is abandoned, the muscles of the right arm and side continue to twitch and an unpleasant sensation of numbness is experienced in the integument of the same parts.

The manner in which the disease is developed, and the order of succession of symptoms, differ with each and every case. The curious fact related by the bank-clerk, that the earliest symptom he experienced was an inability to voluntarily accelerate his writing, and the impossibility of writing at all when his attention was directed to the act, which was present for a length of time before any other sensation was experienced, has not been observed by any other patient into whose case I have inquired. The early development of fatigue, abnormal sensations in the ball of the thumb and stiffness and pain in the fingers, with or without alterations in the character of the hand-writing, are the symptoms which most generally precede the characteristic spasmodic contractions. When the cramp is once developed, it may manifest itself continuously—coming on whenever writing is attempted—or it may be present only when the act is first begun in the morning, and be overcome by persistent effort. The period during which it can be controlled by the will is very limited; its progress may be slow, but it is incessant, and sooner or later, the forearm and arm are affected, and, if writing be not abandoned, it may implicate the muscles of the right side of the body and the left upper extremity.

[To be concluded.]

Progress in Medicine.

REPORT ON ANATOMY.

By Thomas Dwight, Jr., M.D. Harv.

(Concluded from page 251.)

Bloodvessels.

Valves in the Renal Veins. By W. Rivington. *Jour. of Anat. and Physiol.* Nov., 1872.

Conformation de la Veine et des Artères Ombilicales. Paul Berget. *Archives de Physiologie.* Sept. and Oct., 1872.

The structure of the internal veins has received but little attention. The descriptions of the valves of the renal and spermatic veins are singularly imperfect, vague and conflicting. Quain says nothing of the former. Henle mentions them, adding that those of the right side are most developed. Luschka denies their existence, admitting only that one sometimes finds a fold at the lower part of the renal vein, where it empties into the cava, "which may be considered an indication of a valvular formation." Mr. Rivington has carefully examined a small number of subjects, and thinks "that a more extended investigation would be likely to establish the following points: 1. The existence of valves at the orifices of both right and left spermatic veins, with a few exceptions. 2. These valves are, as a general rule, double, being formed of two crescentic folds of lining membrane, which leave a slit-like aperture between them. 3. When no valves exist at the opening of the left spermatic into the left renal vein, valves are generally present in the renal vein within a quarter of an inch from the orifice of the spermatic. He found several cases of valves at or near the mouths of the renal veins and also of the semilunar fold described by Luschka.

Berget describes the folds in the umbilical vessels, which he thinks are improperly called valves by Hyrtl and others. They are folds formed by the whole thickness of the coats of the vessels. They may be on one side alone or they may extend all the way round the vessel. There are dilatations of the cavity between them. The history of the development of these folds is not known, but Dr. Berget has seen them in a cord of five months. He thinks that their office in the arteries is partly to direct the blood to the placenta and partly to act as reservoirs in case of any disturbance of the circulation, but he is unable to suggest the purpose of those in the veins.

Nervous System.

Tamamschef discusses the structure of nerve fibres (*Centralblatt*, Sept. 14th, 1872), coming to conclusion swhich are very different from those of Ranvier, mentioned in the first report, and show that much is still to be done in this line. He describes a delicate, elastic sheath investing the axis cylinder, which, after the use of reagents, he finds to consist of very small bodies (corpusculæ nerveæ) lying in a homogeneous ground substance. These corpuscles may be broken up into granules which will oscillate for hours in oil of turpentine. The corpuscles do not appear for about three-quarters of an hour after the nerve (taken from the living animal) has been under treatment, so that one cannot but doubt if the author is justified in calling them "præformirt." After many experiments, Tamamschef has satisfied himself that the axis cylinder is albuminous.

In a valuable paper published in this JOURNAL, Jan. 23d, 1873, Prof. Burt Wilder recommends the brains of dogs for the study of the relations of brain and mind, because the characters of individuals and families, the transmission of peculiarities, the effects of crossing, &c., can be studied on the living animal, and its brain examined after death, which can occur whenever it is advisable.

Dr. Morris reports, in the *Brit. Med. Jour.*, Oct. 26, 1872, the occurrence of a brain weighing sixty-seven ounces, consequently the heaviest on record.

The lining of the ventricles and their communications with the subarachnoid space are described by Dr. J. Mierzejewsky in the *Centralblatt*, Sept. 28th, 1872 (No. 40). The epithelial cells rest on a layer of reticulated connective tissue mixed with a granular substance lining the cavities. The cells are of all grades, from columnar to squamous. Those on the anterior aspect of the central canal of the cord are more than twice as high as those on the posterior, and a similar plan is noticed in the ventricles. The cells lose the ciliæ and become flat as they pass from the ventricles into the subarachnoid space. The communications between the various cavities are traced by means of injections, and if the results should be confirmed, it will be seen that they are more numerous than is commonly supposed. The communication of the cavity of the fourth ventricle with the subarachnoid space, through the so-called *foramen of Magendie*, is generally admitted, but the author finds two additional ones, situated one on each side between the posterior parts of the peduncles of the cerebellum and the lateral choroid plexuses. There is, also, a passage from the descending horns of the lateral ventricles. The communication between the ventricles is said to be in the region anterior to the pineal gland, and we gather that the foramen of Monro is pervious only under great pressure. These latter statements are not very definite, and hard to reconcile with the usually received ideas, so that we are led to imagine that they may apply only to the brains of some of the lower animals, though there is no statement to that effect.

Mr. Cunningham publishes, in the *Jour. of Anat. and Phys.*, Nov., 1872, an account of a very careful dissection of some of the nerves of the head and neck. Of course, the results obtained from a single subject cannot be of great value, but some of them are of interest. There is some additional evidence that the buccal branch of the smaller division of the inferior maxillary nerve is sensory and not motor like the other branches of that portion. The buccinator is supplied by the facial nerve, which joins the small branches of the buccal. Mr. Cunningham found only two branches of the latter to which this did not occur, and he succeeded in tracing both these to the submucous coat of the mucous membrane of the cheek.

The distribution of the branches of the superior and middle cervical ganglia and of the great and posterior auricular nerves are also described in detail. An accessory phrenic was observed arising from the fifth cervical nerve and joining the phrenic in the upper part of the thorax. Spedl, in *Reichert and Du Bois-Reymond's Archiv*, 1872, heft 3, discusses the frequency of the occurrence of a root to the phrenic from the fifth nerve. He was unable to account for the fact that the pain in disease of the liver or in pericarditis should be referred to the shoulder, and perhaps to the arm, if the phrenic does not have a root from some of the lower cervical nerves which form the brachial plexus. Spedl found a branch from the fifth nerve joining the phrenic in forty-seven cases out of fifty, but the position of the point of union was liable to great variations, which is probably the reason that it is so often considered a rare instead of a normal arrangement.

Connective Tissue and Viscera.

Inasmuch as connective tissue forms the framework of all the viscera, as most of them are more or less glandular in their nature, and as lymph is to be found well-nigh everywhere, it was thought advisable to consider more or less together the following structures which are in many respects very dissimilar.

Zur Histologie des Bindegewebes. Von Dr. Adickes. *Archiv des Heilkunde,* 1872, heft 4 and 5.

Boll on the same in the *Centralblatt,* No. 38 and 39, 1872.

Ueber die Entwicklung und den Bau des elastichen Gewebes im Netzkorpel. Von Dr. Oscar Hertwig. *Schultze's Archiv,* Bd. 9, ht. 1.

Ueber die Anfänge des Speichelgänge in den Alveolen des Speicheldrüsen. Von v. Ebner. *Schultze's Archiv,* Bd. 8, ht. 4.

Untersuchungen über den lymphatischen Apparat in der Milz. Von Dr. Kyber. *Schultze's Archiv,* Bd. 8, ht. 4.

Adickes and Boll give good résumés of the latest views on connective tissue. The results of Dr. Hertwig's studies on the development of fibres in elastic cartilage are briefly as follows: The fibres are formed from cells arranged in rows extending inward from the surface, which is where they appear first. These fibres, when so small as hardly to admit of measurement, are insoluble in caustic soda, which is one of the characteristics of elastic tissue, and consequently they should be considered as such from the beginning. As development proceeds, new fibres are formed from outgrowths of the preceding ones, and from cells, but never from the intercellular substance.

The conclusions reached by von Ebner, in a long paper on the origin of the ducts in the salivary glands (including the pancreas), are rather negative than positive. He claims that the results obtained by injections of Prussian blue are untrustworthy, and that a regular net-work of minute cylindrical ducts in the alveoles does not exist. He thinks it probable that the ducts arise from irregular spaces between the cells and an intra-alveolar net-work, which he believes to be of an epithelial nature.

Kyber describes a perivascular lymphatic system in the interior of the spleen, while another set of lymphatics run on the trabeculæ.

Investigators should remember that though the mammalian spleen is essentially the same throughout the class, yet there are two types according to the arrangement of some of its constituent parts.

One of these types is represented by the spleen of the horse, the ox, the hog, and, according to Billroth, of the sheep. The other, by that of man, the rabbit, the dog, the cat and the mouse.

Muscles of the Kidney.—Ebert, in the *Centralblatt,* 1872, p. 225, describes a net-work of involuntary muscular fibres under the capsule of the human kidney. These fibres are not continuous with those of the bloodvessels. Though, in general, superficial, they have some prolongations into the cortical substance.

Schiff writes, in *Stricker's Medicinische Jahrbuch* (1872, heft 3), on the round ligament of the uterus, and Luschka describes the course and relations of the ureter in the female, in the *Archiv für Gynækologie* (band 4, heft 3). As abstracts of these papers have already been copied from one journal to another, we give merely the original references.

SUPRA-RENAL CAPSULES.

Albert von Brunn writes, in *Schultze's Archiv* (Bd. 8, heft 4), on the minute anatomy and development of these bodies. He has examined them in many animals, and unfortunately does not always mention in which one certain appearances occur. In spite of the differences between the cells in the three layers of the cortical substance, he thinks that they are all of the nature of connective tissue. The author appears not to have found in the superficial portion (zona glomerulosa) the vascular convolutions of which Arnold speaks, but he dwells upon the great dilatation of the vessels in the cortical, and particularly in the medullary substance. He holds that the vessels (excepting the largest veins and arteries) consist merely of the internal coat, covered by a little loose connective tissue, with the cells of the parenchyma lying in its meshes. Thus there is a great opportunity for changes to go on in the blood. There is nothing new concerning the nerve and ganglion-cells, except that decidedly more of the latter are found in the capsule than in the interior of the organ.

Von Brunn has not completed his embryological researches, but has found that, in the fœtal chick, these organs are in the closest relation with the great abdominal vessels. The two portions, however, have not quite the same origin; the cortical being more nearly connected with the aorta, and the medullary with the cardinal vein. The author thinks that the supra-renal bodies are to be considered venous blood-glands, just as the carotid and coccygeal glands are arterial ones. As to the function, he suggests that the cells extract some element from the blood, change it in some manner and replace it. He claims to overthrow the idea that they are wholly or in part "nervous organs," but it is not clear that he has done so, for admitting all his views of the nature of the cells, &c., there still remains this remarkable collection of nerve-cells to account for.

PLACENTA.

Studien über den Bau der menschlichen Placenta und über ihr Erkranken. Dr. C. Hennig. Leipzig. 1872.

Observations on the Structure of the Human Placenta. By Prof. Turner. *Journ. of Anat. and Physiol.*, Nov., 1872.

Zur Rentniss der menschlichen Placenta. Von Dr. F. N. Winkler. *Archiv für Gynækologie*, Bd. 14, heft 2.

The difficulties of the study of the anatomy of this organ are so great that it may not be unadvisable to give a very brief statement concerning some parts of its formation before discussing the questions at issue. Let it be supposed that an impregnated human ovum has fallen into a fold of the mucous membrane of the uterus. It is soon enclosed by two layers of new formation, resulting from the hypertrophy of the lining of the uterus. One of these is formed by the meeting of the free edges of the folds over the ovum, and is called the *decidua* *reflexa*, and grows under the edge of the other, which is continuous with the bottom of the sac, and which is called the *decidua vera*. Both of these layers grow and expand with the ovum. Another new growth appears between the *vera* and the muscular coat of the uterus, constituting the *decidua serotina* (Hennig). Passing over its earliest changes, let the egg be supposed to have reached the point at which a part of its surface is covered with a vascular fringe—the *chorion*—the vessels of which communicate with the body of the embryo; and, further, that the fringe-like projections are arranged in tufts, and project into and among the structures of the decidua. All these structures constitute the placenta, which, theoretically at least, can be divided into a fœtal and an uterine part.

Without following the history of development very closely, Winkler gives a good diagrammatic description of what is to be seen in a section of the placenta. He states that the maternal portion is that which directly determines the form, and also that the fœtal part is nothing more than a convolution of more or less subdivided tufts set into the former.

Beginning at the junction of the uterus and placenta and going inwards, we find, first, the basement layer (Basalplatte), which may be subdivided into two, the outer of small, the inner of large cells. Next comes the cavernous portion, consisting of a fibrous framework, continuous with the basement layer, forming partial separations between large cavities. Third in order, is the closing layer (Schlussplatte), comparatively thick, bounding the cavernous portion. The fœtal portion consists of the chorion (Deckplatte), from which the tufts force their way into the maternal portion. Winkler divides the tufts into three classes:—1st, very small ones, which do not pass the closing layer; 2d, larger ones, which, however, only reach the superficial spaces of the cavernous part; and, finally, those which extend all through it. There is a free communication between all the vessels of the tufts, and the central vessel is surrounded by a network of capillaries. In the placenta, lymph vessels open into arteries and veins of various sizes, as well as into the capillaries.

The generally received opinion is that Winkler's cavernous portion is full of blood from the uterine veins and arteries with which its cavities are held to connect. Dr. Braxton Hicks (*Jour. of Anat. and Physiol.*, May, 1872) is the last who has disputed this. He does so on the ground that he has often separated the two parts of the placenta and found no blood between the fœtal tufts.*

Prof. Turner's paper is to be in three parts, of which only the first has appeared. This is on "the relations of the maternal bloodvessels to the placenta," and contains the account of the experiments in which he has proved beyond question the existence of the sinuses. He has injected them from an artery as well as from a vein of the uterus, in cases where the placentæ were still attached, and he has also watched fluid, which had been injected into the marginal sinus, running among the villi. It was not till this part of his paper was finished, that Prof. Turner's attention was called to the researches of Prof. Dalton, who, several years ago, inflated the intervillar spaces by blowing air into a vein in the wall of the uterus.

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* Vide last Report on Anatomy in this JOURNAL, Sept. 12th, 1872.

There is much difference of opinion as to the presence of any covering to the villi, or, in other words, as to the number of layers separating the blood of the child from that of the mother. Turner states that he has seen a cribriform membrane over the tufts so thick as almost to conceal them, but that in other places he has seen the villi project "free and naked into the canal of the sinus." Winkler found a rudimentary epithelial covering to the villi, and suggests that it is through its imperfections that the system of the embryo may be infected by that of the mother. Hennig writes that there are from two to five layers between the bloods. Dalton's* account is very clear, though apparently theoretical. He says: "The blood of the fœtus is always separated from the blood of the mother by a membrane which has resulted from the successive union and fusion of four different membranes, viz., first, the membrane of the fœtal villus; secondly, that of the uterine follicle; thirdly, the wall of the fœtal bloodvessel; and, fourthly, the wall of the uterine sinus." If we consider Turner's epithelial layer over the villi to have come from the inner coats of the maternal veins, we have fact and theory strictly in accord.

Hennig's work is very comprehensive, but, unfortunately, obscure in many points. It is not easy to catch his idea concerning the capacity and importance of the sinuses. Here is his summing up of the relations of the fœtal villi: "It is my opinion *that the tufts of the chorion reach the reflexa in the second and third months, that they grow through it and then force their way into the vera* (as Spiegelberg has shown), *and that in the last months they run through the deepest parts of the serotina, breaking through not only the openings of the glands, but also the slit in the interstitial tissue* of the maternal tufts, *and, finally, the vessels,* as in the marginal sinus of the maternal portion." It will be observed that, according to Hennig, the placenta consists of two layers of decidua besides the *serotina.* He holds that in their development these layers form parts of two hollow spheres, the *reflexa* above the ovum and the *vera* below it, and that, as they grow, the former introduces itself under the latter. The same author finds that the glands of the uterus are, to a great extent, destroyed during the first months of pregnancy, so that in the latter months they are not to be clearly demonstrated (at least outside of the placenta), and can be recognized only by their orifices, the perforations of the sieve-like decidua.†

COSSACK VACCINATORS.—The *Brit. Med. Jour.*, Dec. 7, 1872, mentions the outbreak of a mutiny at Chodshent. Its cause was the somewhat summary proceedings of the authorities in endeavoring to protect the people against the ravages of smallpox, one of the scourges of the region. Accompanied by Cossacks, the government surgeons entered village after village, and, pouncing upon the inhabitants wherever they found them, inserted the virus. At Chodshent the terror which preceded and followed the medical cavalcade led to open resistance. Fancying that the punctures were intended to mark those sought out for transportation to Russia, the people rose against the Cossacks, killed two of them, and also one of their own elders pressed into assisting at the hateful ceremony. A Russian force having entered the city, two of the rioters were executed, nine sent to the Siberian mines, ten others banished, and several thousand fined.

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* Human Physiology, last edition, p. 646.

† Writers of papers on Anatomy will contribute much assistance in the preparation of these reports if they will forward copies of their papers, addressed to this JOURNAL.—EDS.

Bibliographical Notices.

The Dangers of Chloroform and the Safety and Efficiency of Ether as an Agent in securing the avoidance of Pain in surgical operations. By J. Morgan, M.D., F.R.C.S. London: Baillière, Tindall & Cox. 1872. Pp. 45

This pamphlet presents in elaborate terms the important facts, familiar to a community in which ether is extensively used, bearing upon the efficiency and safety of that agent as an anæsthetic.

It is but a few years since a prediction was printed in this Journal that the day was not far distant when sulphuric ether would be the only and universal anæsthetic. Prejudice against it has ceased in this country, and now, after long delay, Great Britain, self-convicted, wheels into line, and from an antagonist becomes a partisan. We look upon the revival which is at present exercising the frightened adherents of chloroform beyond the sea, as due, not to the missionary efforts of any individual, but as the result of a natural law; in short, it is but another and striking instance of the survival of the strongest.

We had occasion, some time since, in noticing another essay by Mr. Morgan, to use some rather severe language. Of the present, we have only to express a favorable opinion; and, as authority in matters pertaining to ether fully entitled to write pastoral letters, we commend it to our English converts in the belief that its perusal will do them good. We can most confidently assure them of the correctness of Mr. Morgan's statement, "that chloroform, with its signal dangers, has claims far inferior to ether as a pain destroyer; and that such a resolution as was adopted by the Massachusetts Hospital—'that the exclusive use of ether should be an absolute law of the Institution'—has been most advantageous for its patients."

Obstetric Aphorisms: for the use of Students commencing Midwifery Practice. By Joseph G. Swayne, M.D. Second American from the fifth revised English edition, with additions. By E. R. Hutchins, M.D. Philadelphia: 1873. Pp. 189.

This little manual has passed through four editions in England, and the second American, reprinted from the fifth revised English edition, is now given to the profession with a few brief and rather unimportant additions by Dr. E. R. Hutchins, of Cedar Rapids, Iowa. The book, as the author states in his preface, is not intended to be used, in any way, as a substitute for a systematic treatise on midwifery, but rather as a pocket guide which shall give the student a few brief and practical directions respecting the management of ordinary cases of labor, and which shall point out, in extraordinary cases, when and how he may act upon his own responsibility and when he ought to send for assistance. The object of the book is admirably carried out, and the author has managed to give in very concise and clear language the diagnosis and treatment of most of the complications which are liable to occur in the management of obstetric cases. Without commending in any way the substitution of pocket-guide books for personal knowledge, we must admit that Dr. Swayne, in his *Obstetric Aphorisms*, gives us at least a most excellent manual for the medical student who is preparing for his examination in obstetrics.

Pharmacopœia of the United States. Fifth Decennial Edition. Philadelphia: J. B. Lippincott & Co. Pages 383.

To any one first led to consider the subject of the use of drugs in the light of certain annual addresses and other popular productions of a like tone, the appearance of a new edition of the Pharmacopœia must appear like a gross anachronism, a ghost from the dark ages of medicine intruding himself into the clear light of modern science. If, however, he contemplated the thousand advertisements of panaceas which fill the columns of the most respectable newspapers, he might wonder that the book is not larger, or account for its reasonable dimensions by adopting the popular theory that the medical profession, like Molière's candidate, have sworn to use no drugs but those presented by the "faculty" and obstinately refuse to recognize the infallible means of cure which are constantly being re-discovered by gentlemen whose cathartic and diuretic services are rewarded by "palatial" residences, six-in-hand equipages in which to outshine the President of the United States, or even the privilege of hiring a respectable village to transmit the borborygmi of their peristaltic fame resounding to posterity. A little investigation, however, will suffice to show that, with few exceptions, the pharmaceutical needs of the community may be as well supplied from officinal sources as by private enterprise. Popular medicines generally belong to one of three classes:—1. Preparations of inert or useless substances (usually with some unfamiliar name) which have long been given up by the profession, or have a value merely as replacing some other drug not so easily obtained, such as galangal, syrup of symplocarpus, coltsfoot, &c. 2. Preparations of useful drugs, apparently cheap because of inferior quality (elixirs of calisaya, bitters, buchus, &c.). 3. Secret combinations of well-known drugs (soothing syrups, cathartic pills and the like).

The new edition of the Pharmacopœia has been made to include nearly all the improvements of the last ten years, both in the way of materia medica and preparations. Few remedies of real value fail to obtain recognition, but we wish that the committee had taken under their protection the useful but much bequacked preparations of pepsin and pancreatine. The elegant, efficient and, at the same time, cheap preparation of pepsin, by Mr. Scheffer, of Louisville, might very properly have found recognition here. Among the important preparations added are digitalin, extract of calabar bean, bromide of ammonium and citrate of lithia. Conium is represented by the "succus" and extract of the seeds, in addition to three of the older preparations, one having been dismissed. The American hemp, which Dr. Wood has shown to possess the virtues of cannabis Indica, has been made officinal.

A whole class of glycerites has been added, as well as *chartæ, cantharidis* and *sinapis*. A large number of suppositories also become the objects of officinal directions. A noticeable feature in regard to the fluid extracts, beside the great increase of their number, is the preparation of many of them with glycerine. Of the preparations dismissed, few if any are to be regretted, and more might have been spared. The presence of one, at least, tincture of aconite leaves, was liable to produce serious mistakes.

As to the nomenclature, we have one fault to find, which is that so few of the common names of plants are given among the synonyms. Digitalis may be properly enough anglicised by the same word, but foxglove should certainly appear as a common name. Podophyllum is often called mandrake; and chimaphila, in this neighborhood at least, more frequently wintergreen than pipsissewa. Gaultheria, which has five or six English names, is translated gaultheria, probably on account of this very superfluity, but no synonym is given.

We will close with one more wish, which is that the committee of revision had been able to devise some method for bringing into use, or at least into notice, the decimal system of weights and measures. Although ourselves unable to suggest a plan, it seems so exceedingly desirable that this system, already so largely in use for chemical purposes, and even in pharmacy, should be introduced into the ordinary affairs of life, that a little temporary sacrifice of commerce might well be made to attain this end.

Notwithstanding these criticisms, it seems to us that the committee have well succeeded in carrying out their object, which is to "gather up and hoard for use what has been determined to be positive improvement, without pandering to fashion, or to doubtful novelties in pharmaceutical science."

The Science and Practice of Medicine. By WILLIAM AITKEN, M.D., Professor of Pathology in the Army Medical School. Third American, from the Sixth London Edition, with additions by Meredith Clymer, M.D. Penn. Philadelphia: Lindsay & Blakiston. 1872. Two vols., pp. 1056 and 962.

DR. AITKEN may well call this the "representative work" of the Medical Science and Practice of the present day. It is a reliable text-book for the younger men in medicine, and may be looked on as a compendium, most thorough and complete, for both the older and more recent members of the profession.

The work has been thoroughly revised and much has been rewritten; new articles on important subjects have been added, and the whole work has been conformed to the advanced standard of the day.

The present edition now embraces a consideration of the topics in the order of classification of the College of Physicians of London. This plan has been adopted by the author as an inducement to secure a uniform system of naming diseases in the medical schools.

For sale at 135 Washington Street, by A. Williams & Co.

Unconscious Action of the Brain, and Epidemic Delusions. By Dr. W. B. Carpenter, F.R.S., &c. &c.

These are two lectures by the well-known English physiologist (Dr. W. B. Carpenter) whose physiological researches and writings are not less familiar to the American than to the European medical public. They form Part No. 6 of a series of Essays called "Half-hour Recreations in Popular Science," published by Estes & Lauriat, Boston. In the first of these lectures, Dr. Carpenter explains and illustrates the unconscious or automatic action of the brain and spinal cord. In the second lecture, he shows how this automatic action serves to explain many of the extraordinary delusions that have prevailed more or less extensively from the earliest ages to the present time. He refers to the Flagellants, the Dancing Mania, the Convulsionnaires of St. Medard of the middle ages, and to the Spiritualism of modern times, as instances of epidemic delusions that may be explained by our present knowledge of the nervous system. He points out with great clearness the important physiological fact that the brain is to a large extent a machine like the rest of the body, and one capable of doing a great deal of work by itself, unconsciously and automatically; and that when the brain and the body work together in this automatic way independently of the will, phenomena are sometimes produced that are equally curious and extraordinary. The key to the explanation of the phenomena of spiritualism is undoubtedly to be found in the physiological fact clearly illustrated by Dr. Carpenter in these lectures that "the powers and activities of the mind are to a very great degree independent of the will," and "that the mind will go on of itself without any more than just the starting of the will, in the same manner as a horse will go on in the direction that it has been accustomed to go with merely the smallest impulse given by the voice or the hand or the heel of the rider." In accordance with this law, muscular force may be exerted by one who is unconscious of the effort his muscles make, and mental impressions received from sources that the individual takes no cognizance of. Those who care to know how physiological science deals with many of the curious phenomena of spiritualism and kindred delusions will do well to read these lectures of Dr. Carpenter.

E. H. C.

Seventeenth Annual Report of the Trustees of the State Lunatic Asylum at Northampton. Boston. 1873.

The bulk of this public document is made up of the report of Dr. Pliny Earle, the well-known Superintendent of this Asylum, giving, in a clear and succinct form, some very interesting statistical information respecting the past history of the institution, covering the entire fifteen years of its existence. The number of persons admitted during the year ending September 30, 1872, was 195. The number treated in the asylum during the year was 619, of which 299 were males and 320 females. The smallest number under treatment upon any one day was 412; the largest number, 455. As to the condition of the patients upon leaving the hospital, 40 were discharged as cured, 60 improved, 49 unimproved; the number of deaths was 37. To those familiar with the results obtained at other institutions, it may at first sight seem that the ratio of recoveries exhibited by these figures is small, and we should be guilty of an act of injustice to Dr. Earle if we did not append some explanation. It appears to be the custom to transfer to this hospital from the other State institutions a certain class of chronic cases, or such as give but slight indication of immediate restoration. A very considerable number of these patients, therefore, are not presumed to be amenable to medical treatment, and the ratio of recoveries is, of course, correspondingly less than would be returned, provided all the patients were received directly from their homes, and in the earlier stages of the disorder. Again, a less favorable color is given to these returns by the practice of removing, at an early period after admission, those beneficiaries who, being immigrants, chanced to land in other States, the responsibility for whose support consequently rests with those States. Of this class many are taken away, leaving behind the record of improved, who, had they been permitted to remain longer, would, in all probability, have been completely restored.

The report gives evidence of the efficient management of the asylum, and of the general adoption of the more modern principles in the treatment of this class of unfortunates, care being taken to divert their minds by means of assemblies, dances and exhibitions.

As an adjunct to the administration of drugs in the various stages of insanity, Dr. Earle attaches great importance to *open-air industrial occupations,* not simply as a hygienic measure, nor for the sole purpose of diverting the thoughts of the insane, but rather as a potent means of effecting cure. Manual labor, and especially farm-work, is, therefore, recommended here as a therapeutic agent, and the able-bodied are stimulated to enter the field by appeals to their palate, or by the promise of various privileges or perquisites. In this way, a large part of the farm work, as well as the improvements about the estate, have been actually carried out by the patients. A list is inserted of the products of the farm thus raised, the value of which amounts to a little less than $10,000.

The argument in favor of additional hospital accommodations for the insane in this State is clear and convincing, and cannot fail to have due weight with our legislative authorities. Massachusetts, it is shown, has accommodations for only about *one and one-third to a thousand* of the population, whereas the Canton of Zürich, in Switzerland, has accommodations for very nearly *four to a thousand,* that is to say, a hospital capacity three times as great as that of Massachusetts. To medical men, we would especially commend that portion of this report which relates to the Scotch plan of boarding out insane patients in private families, which has been most extensively carried out in the Belgian Colony of Gheel, and also the cottage system of hospital buildings, like that adopted at the Whittingham Asylum, in Lancashire, and which has been hitherto advocated by Dr. Bemis, of Worcester. Without entering into a general discussion of the merits of the Scotch sysem, Dr. Earle adduces very cogent reasons, showing that it is not applicable to a state of society like that existing in Massachusetts. An insuperable obstacle to the introduction of this system is the high price obtained here for labor, which renders easy the earning of a livelihood, and which makes it difficult if not impossible to find responsible families who would be willing, at a reasonable rate, to provide suitable homes for insane persons.

The adoption of the cottage plan of hospital, composed of several detached edifices, is objected to by Dr. Earle on two grounds, and both these objections strike us as being reasonable and practical. They are briefly as follows: First, *the excess of cost*; second, *the difficulty of surveillance.* The former circumstance affects only the pockets of the taxpayers. The increased duties of the superior officers resulting from the increased labor of watching these separate buildings tends necessarily to interfere with the proper supervision of the asylum, and thus affect directly the welfare of the patients. A. H. N.

A System of Oral Surgery. Being a Consideration of the Diseases and Surgery of the Mouth, Jaws, and Associate Parts. By JAMES E. GARRETSON, M.D., D.D.S. Oral Surgeon to the Medical Department of the University of Pennsylvania, &c. Philadelphia: J. B. Lippincott & Co. 1873. Pp. 1091.

DR. GARRETSON'S book seeks to cover the vantage ground between the two professions of medicine and dentistry—a hiatus which has been continuously in the mind of the author, as he asserts, in the composition of the work. To bridge over this gap "by supplying the lacking span is the highest ambition, as it has been the almost life-long labor, of the author."

Two years ago, the author gave to the public a work very similar to the present, and, indeed, this "system," following the elements of the subject, from the first departures from normal life, is but a farther unfolding of the same idea. It is likely to be of assistance to the dentist who finds that a knowledge of general medicine is necessary to the comprehension of oral surgery; and to the general practitioner whose duties occasionally lead him into the province of the dentist.

Aids to the Diagnosis of Diseases of the Kidneys. By W. R. BASHAM, F.R.C.P., formerly Censor and Croonian Lecturer and Examiner in Medicine for the License of the College. Philadelphia: Lindsay & Blakiston. 1872. Pp. 48.

THIS little volume contains sixty drawings from specimens of albuminous urine, and the explanatory text, with a statement of the termination, whether in death or recovery. It is the author's object to give a standard of comparison for students and practitioners who have not frequent opportunities for microscopic research, and to such the book may be very useful.

BOOKS RECEIVED.

Notes on Asthma; its Nature, Forms and Treatment. By John C. Thorowgood, M.D. Lond. Second Edition. Philadelphia: Lindsay & Blakiston. 1873. (For sale by A. Williams & Co.)

Club-foot; its Causes, Pathology and Treatment. Being the Essay to which the Jacksonian Prize for 1864, given by the Royal College of Surgeons, was awarded. By William Adams, F.R.C.S. Second Edition. Philadelphia: Lindsay & Blakiston. (For sale by A. Williams & Co.

PAMPHLETS RECEIVED.

Annual Report of the Surgeon-General of the Commonwealth of Massachusetts for the year ending Dec. 31, 1872.

Abstracts and Intelligence.

THE PHYSIOLOGY OF TEARS.—Dr. Daniel Tuke, who has been investigating this subject, thinks we must confess with Brodie that we cannot answer the simple question why or how a certain state of mind augments the secretion of the lachrymal gland. Gratiolet inferred, partly from his own sensations, that tears result from reflex irradiations which traverse the fifth pair of nerves; that is to say, the emotion of joy or sorrow acts first upon the heart or the other viscera through motor channels, and is then reflected upon the sensory nerve supplying the gland. But this does not seem anatomically or physiologically justifiable. It is much more likely that the influence is transmitted directly either to the capillaries of the gland by actively dilating motor nerves, or through nerves to the lachrymal cells themselves, directly exciting their functional activity. We might apply to the lachrymal gland Sinitzin's conclusions in regard to the trophic influence of the cervical sympathetic and the fifth pair on the eyeball; but some difficulties present themselves, however, into which we cannot now enter. The *quality* of the secretion also seems to be altered by powerful emotions; the saline ingredients being increased, causing "a strong brine." Lastly, the secretion may be entirely checked. The intensity of the feeling or the suddenness of the sorrow is the most frequently witnessed cause of this.

Daily observation shows that the first result of distressing intelligence is a negative one—inability to cry. See, too, what the want of a handkerchief may do. "I went," says Hunter, "to see Mrs. Siddons' acting. I had a full conviction that I should be very much affected; but unfortunately I had no handkerchief, and the distress was in, for the want of that requisite when one is crying, and a fear that I should cry, stopped up every tear, and I was ashamed that I did not, nor could not cry."

HYSTERICAL ISCHURIA.—M. Charcot, in his opening lecture at La Salpêtrière (*Ann. et Bul. de la Soc. de Gand*, July, 1872), gives an account of an extraordinary case of suppression of urine. A young woman, subject to various manifestations of hysteria, began in the month of April, 1871, to experience a remarkable diminution of the urinary secretion. Remembering similar instances (that of Nysten, for example), in which the fraud resulted in detection, M. Charcot for a long time regarded this as a case of deception. By keeping her, however, under prolonged observation, every precaution having been taken to prevent any fraud, the reality of her symptoms was placed beyond a doubt.

The patient was confined to her bed, having lost the use of her limbs, from contraction of the joints, which could not be extended even when she was under the influence of chloroform. To prevent all imposition, she was now kept under the constant observation of one or more women, although she was herself quite unaware of their presence. It was found that the retention of urine was complete. None was voided without the aid of the catheter, nor was the linen of the bed in the least soiled. During a period of several months the quantity of water drawn off by means of the catheter did not exceed 30 grammes each day, and in several instances for some successive days the suppression was complete.

It transpired at the same time that the woman experienced daily attacks of vomiting, and in the fluid thrown up a considerable quantity of urea was found. At the end of several months, the ischuria gave way to a slight polyuria, at which time all vomiting ceased. This was followed the present year by another period of diminution of the urinary secretion, this time without suppression, the vomited matter being less abundant than before.

The following is the average amount of urine voided and matter vomited for a period of twelve days.

Matter Vomited, 362 grammes, including 2 grammes of urea.

Urine, 206 grammes, including 3 grammes of urea.

The amount of urea excreted by the skin and the intestines must have been insignificant, as the patient suffered from obstinate constipation, and did not perspire freely. It can be affirmed then that for a period of several months this woman excreted a few grammes only of urea. In spite of this anomalous condition of the kidneys, her general health remained good, none of those symptoms appearing which are generally observed in patients suffering from retention.

The blood was found, upon examination, to contain no more than the usual amount of urea, so that it must be admitted that the production of this constituent was much below the normal amount.

M. Charcot proceeds to show at length that in the present instance the retention of urine was not dependent on a spasm of the ureter, for where the canal of the ureter is obstructed, either by means of a ligature or by the presence of a calculus, the urine, while it is secreted less abundantly, becomes very weak, which was not the case with this woman, so that the cause of the ischuria must have have had seat in the kidneys. This case will serve to demonstrate that hysterical ischuria has an actual existence, a fact which has been very generally doubted, so many spurious cases of this affection have from time to time made their appearance. It is not unreasonable, therefore, to regard the hysterical vomiting, which takes place when ischuria is present, as a supplementary process to the functions of the kidneys.

NITRITE OF AMYL IN ANGINA PECTORIS.—*The Practitioner*, Dec. 1872, contains an article on the use of this remedy by W. H. Madden, M.D. The writer's father died of angina pectoris, and he himself had cardiac disease. July 8, he had a severe attack of angina, and from this date the paroxysms were of frequent occurrence and of increased violence. Various remedies were tried, but with little or no benefit.

At length the inhalation of the nitrite of amyl was suggested and tried. The doctor thus describes its effect: "The spasm was, as it were, strangled at its birth. It certainly did not last *two* minutes, instead of the old weary *twenty*. And so it continued. The frequency of the paroxysms was not diminished for some time; but they were mere bagatelles as compared with their predecessors. The attacks became less and less frequent, and finally ceased." At the time of writing (Oct. 11), he had not had an attack for five weeks.

The phenomena presented by the action of the remedy are thus described: "The first effect was often bronchial irritation, causing cough; then quickened circulation; then a sense of great fulness in the temples and burning of the ears; then a violent commotion in the chest, tumultuous action of the heart and quick respiration. The angina then died out first in the chest, next in the left upper arm, and last of all in the wrist, where it was usually extremely severe. In speaking of my first experiment with the amyl, I said the spasm was, as it were, *strangled;* this word accurately expresses the sensation. I felt as if a new power was suddenly called into play, which seized hold of and, by a violent effort, crushed out the force previously in action. It was not by any means in itself a pleasant process; but I delighted in it, for I knew the end would be relief. When the pain had ceased, there was generally for some time a strong, involuntary tendency to suspension of breathing, each prolonged pause being followed by a very deep inspiration. There was not at any time the slightest confusion of thought, or disturbance of vision, but occasionally slight and transient headache."

Correspondence.

INFLESHED TOE-NAIL.

MESSRS. EDITORS,—This affection, so difficult to name, has been yet more difficult to cure, as the annals of surgery abundantly testify; so that even to this day, as Dr. Cotting justly remarks, "it still remains one of the minor *opprobria* of our art." In M. Velpeau's Operative Surgery, published in three large volumes of some 3000 pages, with a quarto Atlas of Plates—large enough, one would think, to exhaust the entire field—he discourses on this disease and its remedies (in vol. i.) from page 363 to 375 inclusive. And, after discussing the three methods usually practised—"destruction of the nail," "destruction of fungosities," and "re-adjustment of the nail,"—he gives decided preference, in most cases, to evulsion. Now it is interesting to observe how near one sometimes comes to making an important discovery and yet misses it! Ambrose Paré, in the 15th century, describes an operation precisely the same as that practised by Dr. Cotting, but failed simply because he did not cut deep enough. His operation (Velpeau, tom. i., p. 369) consisted in "cutting off completely, and with one stroke, the flesh lapping over (*recourbée sur*) upon the nail." And the record is, that he "often succeeded by adopting this mode." He failed, of course, when he simply removed the fungosities, and "succeeded" when his knife was carried through the sound flesh. The same remarks of success and failure apply to the operation of M. Brachet, who followed Paré, with a slight modification of his operation. It is thus described:—"Holding his bistoury like a writing pen, he introduces its point between the nail and the raised border of the soft parts, which he cuts through from above below, and separates first at its back part; then, seizing with the forceps the flap which has been thus cut, he terminates its section forwards by a second stroke of the bistoury."

As Paré's operation is the same as that practised by Dr. Cotting, so is M. Brachet's that which I am about to describe, with this important difference in both cases, however, that we cut deeper, and always cure the disease, whilst they, for want of a bold sweep of the bistoury, often failed. It was as long ago as 1837, when I was a member of Prof. Delamater's private class, that one of the students was suffering excruciating tortures from this disease, and had been for years. At times unable to walk, and often deprived of sleep, he had consulted different surgeons, who recommended as many different remedies, some amounting merely to palliatives, and others falling short even of that. The affected toe was enormously enlarged, with both edges of the nail imbedded in a fungous mass, while the outer edge was very much inverted. Dr. Delamater removed a generous slice from each side of the toe, freely liberating the edges of the nail. The wounds healed by granulation, and in a few weeks the cure was completed; nor has there ever been a return of the difficulty. So gratifying was the result, and so deeply was I impressed with the perfect success of the operation, that when I purchased my first pocket-case of surgical instruments, soon after, I was careful to add a double-edged bistoury, specially adapted to this operation. My mode of operating—differing in no essential particular from that of Prof. Delamater—has always been to drop this double-edged bistoury down between the fungus and the nail, bringing it out on the under side of the toe with a backward sweep, following the edge of the nail as a guide. Then, with a dog-tooth forceps, grasping the flap thus made, a second stroke forwards with the knife, still closely applied to the edge of the nail, completes the operation.

This operation, one of the earliest I performed after graduating, has always been successful in my hands; so that, in a practice now exceeding more than a third of a century, I have no case of failure to record. It has been done both with and without the aid of anæsthetics. My earlier operations, of course, were done before the discovery of ether. The readers of your JOUR-

NAL will thus see that the operation, as above described, while it is even more radical than that which Dr. Cotting calls his own, and differently performed, is yet essentially the same. Now the writer lays no claim to originality in this matter, and is perfectly willing that Drs. Cotting and Gunn should settle claims of priority between themselves. The operation is simply that of Ambrose Paré, modified by M. Brachet, and taught to be done more thoroughly by Prof. Delamater, who practised it forty years ago; and I moreover contend that if done in the radical manner above indicated, so that the edge of the nail is uncovered, it can never fail of absolute success. It makes no difference whether the nail is inverted or not; it can never again become "imbedded," "incarnated," "infleshed," or *incarné*.

I had just finished this, and was about affixing my signature, when *Braithwaite* for January, 1873, was laid on my desk. In glancing over its pages, I see that B. Blower, Esq., of Liverpool, desires "to add a mite to the evidence repeatedly given in the journals, that the removal of the nail (to his knowledge not always successful) is unnecessary." But instead of the radical course pursued by Dr. Cotting, and recommended here, he inserts bits of compressed sponge beneath the nail, and destroys the granulations with nitric acid. This practice may succeed in mild cases; but in grave ones must fail, as all similar plans, for centuries past, have failed. I will only add that in all the operations I have done for this disease, I have never interfered with the nail. It is quite unnecessary, as the nail takes care of itself when once the flesh in which it is imbedded is removed. The only ambition I have in this whole matter is that my "mite of evidence," may be made subservient with Dr. Cotting's in establishing a "new procedure" in this particular operation of minor surgery.

Yours &c.,

37 *Maverick Square*, *Boston*, *Feb.* 13, 1873. DANL. V. FOLTS.

LEPROSY IS NOT CONTAGIOUS.

MESSRS. EDITORS,—In behalf of the rich and poor lepers all over the world, I would enter my protest against the conclusions in Dr. Kneeland's article in the JOURNAL of March 6th, as to the contagiousness of leprosy and the necessity of separating these unfortunates from their fellow-men. From some personal knowledge of the disease itself, but more especially from a somewhat extended study of what has been said and written concerning it, in various parts of the world, I am firmly of the opinion that it is not contagious. This has always been the conclusion arrived at by those who have gone over the same ground; for instance, the committee of the Royal College of Physicians, who replied to the Colonial Office by a report submitted to the College July 20, 1863, as follows:—

"The committee having had referred to them the letter of Mr. Fortescue of July 9th to Dr. Pitman, the Registrar, conveying the wish of the Duke of Newcastle to be furnished with a statement from the committee, exhibiting, as forcibly as possible, the full weight of the evidence which has been obtained, down to this time, as to the contagiousness of leprosy, and the conclusions which the committee have drawn therefrom, beg leave to report:

"1st. The number of replies hitherto received through the Colonial and Foreign Offices amounts to sixty-two. These returns have come from many of the West India Colonies, and also from New Brunswick, from the Ionian Islands, and from several places in the Turkish Empire; from Sierra Leone, Tunis, and Cairo; and from Tabreez, Ceylon, Hong Kong, China, and Kanawaha. Besides these official returns, four replies have been received from medical gentlemen now residing in this country, but who have seen the disease in different countries abroad.

"2d. In forty-five of the replies, a decided opinion is expressed that the disease is not contagious. Only a few of the reporters, however, give any facts in support of this opinion.

"3d. In nine of the replies, an opinion is expressed that the disease is not contagious, but no satisfactory evidence is adduced in favor of this view.

"4th. In the remaining twelves replies, either no opinion is expressed on the subject of contagion, or the statements made are quite indefinite.

"5th. The committee, having carefully considered the replies already received, are of the opinion that the weight and value of the evidence they furnish is very greatly in favor of the non-contagiousness of leprosy.

"6th. The committee, therefore, can only repeat the statement made in their former report to the College, that the replies already received contain no evidence which, in their opinion, justifies any measures for the compulsory segregation of lepers."

This committee consisted of Thomas Watson, President, George Budd, G. Owen Rees, Arthur Farre, William W. Gull, Gavin Milroy, E. Headlam Greenhow, Henry A. Pitman, Registrar.

Mr. Fortescue's letter, above referred to, says:—"His Grace desires me to inform you that he contemplates sending out a circular to the Governors of all Her Majesty's Colonies, expressing an opinion that any laws affecting the personal liberty of lepers ought to be repealed; and that in the meantime, if they shall not be repealed, any action of the executive authority in enforcement of them, which is merely authorized and not enjoined by the law, ought to cease."

The committee again say, further on in this voluminous report of some 300 pages, "With respect to the employment of measures for the compulsory segregation of leprous persons, the opinion expressed by the committee in their communications to the Colonial Office on May 21 and July 20, 1863, has been much strengthened by the evidence subsequently received."

Finally, the 10th article of their conclusions reads thus:—

"The all but unanimous conviction of the most experienced observers in different parts of the world is quite opposed to the belief that leprosy is contagious or communicable by proximity or contact with the diseased. The evidence derived from the experience of the attendants in leper asylums is especially conclusive on this point.

"The few instances that have been reported in a contrary sense either rest on imperfect observation, or they are recorded with so little attention to the necessary details as not to affect the above conclusion.

"That leprosy is rarely, if ever, transmissible by sexual intercourse, when one of the parties has no tendency whatever to the disease, is the opinion of the great majority of the respondents who have had the largest opportunities of observation."

This is the invariable report from *students* of the disease all over the world. Such men as Danielssen and Boeck in Norway state that:—"Among the hundreds of lepers whom we have seen daily, not a single instance has occurred of the disease spreading by contagion. We know many married persons, one of whom is leprous, co-habiting for years without the other becoming affected. At St. George's Hospital, many of the attendants on the inmates have lived there for more than thirty years, and are quite free from any trace of the disease. As the result of our observations, we have only to deny the contagiousness of leprosy."

I might adduce, in addition, the reports of such men as Virchow, Hebra and Kaposi, but I trust I have quoted enough to prevent any rich or poor leper among us, and they are among us, from being hastily regarded with any more feeling of horror, or shunned for any other reason, than the personal disfigurement the disease produces. The time is not, perhaps, very far distant in this country when boards of health may be called upon for an authoritive opinion as to the propriety of the segregation of leprous persons from the rest of the community, as was formerly done not very far from this State. Dr. Kneeland's communication might help lead to such a segregation. In behalf, therefore, of the rights of the unfortunate, both rich and poor lepers, I have answered it by the above quotations.

15 *Chestnut St., Boston.* B. JOY JEFFRIES, M.D.

Medical Miscellany.

EIGHT hundred cellar dwellings in Leeds, England, are reported by the Sanitary Committee to be totally unfit for human habitation.

SMALLPOX.—The number of deaths by this disease during last week has been but five, and there is quite a falling off in the number of new cases reported, showing a sure and steady abatement of the malady that has caused so much fear and suffering during the past winter.

APPOINTMENTS.—Drs. W. P. Bolles and C. B. Belt have been appointed Assistant Surgeons at the City Hospital for the ensuing year.

Dr. C. W. Stevens, of Charlestown, has been elected City Physician of that city, in place of Dr. E. J. Forster, who declined re-election.

MR. W. B. ANDREWS, for many years the Janitor at the Medical School in this city, was found dead on Tuesday morning last, by his son, in one of the upper rooms of the college building, having committed suicide by discharging the contents of his own pistol through his mouth into his brain.

No cause or motive for the act has as yet been discovered. The school has lost the service of a valuable and efficient officer.

WE notice on the list of new members of the Massachusetts Medical Society the names of George K. Sabine, Edward H. Bradford, William H. Workman and Frederick C. Shattuck, at present House Pupils at the Massachusetts General Hospital.

DR. W. F. JENKS, of Philadelphia, has used nitrite of amyl in *puerperal convulsions* with success. He allowed the patient to inhale the medicine from a handkerchief in the usual manner, some five drops only having been used.

THE *Prix Civiale* of one thousand francs, given every two years for the best essay on any subject connected with the urinary organs, has been awarded to Mr. Thomas B. Curtis, of this city, who, for many years, has been pursuing his medical studies in Paris. This prize is open to the Internes of hospitals, about one hundred and thirty in number. It has been given but once since Civiale's death, to Reverdin, whose name has become well known in connection with epidemic grafting. The subject of Mr. Curtis's essay is—The Treatment of Stricture by Dilatation. This is but one of many honors won by Mr. Curtis since his connection with the Ecole de Médecine. We understand he intends, after taking his degree this spring, to return to this city, where we hope he will decide to remain.

THE REMOVAL OF FOREIGN BODIES FROM THE EAR. Dr. J. Gruber maintains that foreign bodies are most easily removed from the external ear by means of the syringe, this being simpler than any other method of extraction, and less liable to inflict injury upon the tympanum and other parts of this organ. He cites several cases to illustrate how many vegetable substances, which find their way particularly into the ears of children, can be made to shrink up by the application of certain astringents, such as diluted lime water, or a solution of the sulphate of zinc, and can then be readily removed.

THE monthly report of the City Registrar of Providence contains the following extract:—

During the month of January, 28 cases of smallpox, of every description, were reported in this city. Of this number, 5 died. The disease still continues, though not increasing. Thus far, this winter, the cases have not been so numerous, nor so fatal as they were during the last winter. The whole number of cases this winter to the 12th of February has been 52. Of these, many have been very slight. About one-half of the whole number have come from Boston.

WORTH REPEATING.—"No one can injure a professional brother without still more deeply injuring himself, advice we are sorry to say," says the London *Lancet*, "not universally followed."

DEATH OF BARON CHARLES DUPIN.—This eminent member of the Académie des Sciences, the last of three celebrated brothers, died Jan. 18th, in the 89th year of his age. M. Dupin was laborious to the last, and only a few days before his death read an elaborate paper on the results of the census just taken in France. His death bears some connection with that of Napoleon III., whose decease has made numbers anxious as the state of their bladders. Baron Dupin unfortunately determined to pass a catheter for himself, and employed a flexible one, probably without examining its solidity. While passing under the pubes it broke, and a fragment engaged in the deep portion of the urethra. Attempts were made to extract it, but it slipped into the bladder. A slight rigor followed, and attempts at extraction were postponed, but the patient died shortly after, before these could be carried out.—*Medical Times and Gazette.*

DEATH FROM NITROUS OXIDE.—A death from inhalation of nitrous oxide gas occurred at Exeter (England), January 23d last. The gas was given to produce insensibility during the extraction of a tooth. The patient was a woman about forty years of age. After a few inhalations, the pulse was noticed to be becoming weak, and the administration was stopped for a time. As the patient had not become insensible, the inhalation was resumed, and the tooth withdrawn. The patient had become livid, and in a few minutes died. Her health had been excellent previously, and there was no reason known why she would not be a good subject for the gas. This is said to be the first death from nitrous oxide in England. A case has also been reported in this country.

ERRATA.—On page 245, line 11, for "dead" read *dry*. Page 248, in 3d line of paragraph on tricœlian heart, instead of "last" read *first*. Page 251, 2d line of second paragraph, for "place" read *face*.

PAMPHLETS RECEIVED.—Transactions of the Territorial Medical Society at its Second Annual Meeting, held in Denver, Col., September, 1872. Denver. 1873. Pp. 34.

MARRIED,—In Chicago, 26th ult., E. W. Sawyer, M.D., of Boston, Mass., to Miss Mollie E. Manney, of Chicago.

MORTALITY IN MASSACHUSETTS.—*Deaths in fifteen Cities and Towns for the week ending March* 1, 1873.

Boston, 180—Charlestown, 12—Worcester, 10—Lowell, 24—Milford, 5—Chelsea, 7—Cambridge, 20—Salem, 7—Lawrence, 7—Lynn, 16—Fitchburg, 5—Taunton, 6—Newburyport, 1—Somerville, 9—Fall River, 17. Total, 326.

Prevalent Diseases.—Consumption, 51—pneumonia, 36—scarlet fever, 16—smallpox, 13—croup and diphtheria, 11—typhoid fever, 9.

The deaths from smallpox were as follows:—In Boston eleven, Cambridge one, and Charlestown one. Of the deaths from scarlet fever, fifteen were in Boston.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, March 8th, 146. Males, 71; females, 75. Accident, 1—abscess, 1—apoplexy, 1—asthma, 1—aneurism, 1—inflammation of the bowels, 1—bronchitis, 4—congestion of the brain, 1—disease of the brain, 11—cancer, 2—consumption, 26—cerebro-spinal meningitis, 5—convulsions, 4—debility, 7—diarrhœa, 1—dropsy, 4—dropsy of the brain, 7—diphtheria, 1—erysipelas, 4—scarlet fever, 11 disease of the heart, 3—hæmorrhage, 1—intemperance, 2—disease of the kidneys, 1—disease of the liver, 2—congestion of the lungs, 1—inflammation of the lungs, 11—marasmus, 2—old age, 4—paralysis, 3—premature birth, 2—peritonitis, 1—puerperal disease, 3—rheumatism, 1—syphilis, 1—smallpox, 5—disease of the spine, 1—teething, 1—ulceration of throat, 1—unknown, 6.

Under 5 years of age, 58—between 5 and 20 years, 19—between 20 and 40 years, 24—between 40 and 60 years, 22—over 60 years, 23. Born in the United States, 103—Ireland, 33—other places, 10.

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Original Communications.

WRITERS' CRAMP, OR SCRIVENERS' PALSY.

By Reuben A. Vance, M.D., New York.

[Concluded from p. 265.]

The cause of writers' cramp cannot, in all cases, be definitely determined. That it occurs generally in men, and in those men who write much and have done so for a length of time, is so striking a fact, that in almost all systematic accounts of the disease, we find that the male sex, middle age and occupation are treated of as the causes of this affection. When we consider the immense number who write, and the small proportion who suffer from writers' cramp; the multitude who pursue this practice to excess and the comparative infrequency with which such persons are attacked; and the occasional occurrence of the disease among those who write but little, and the frequent development of an affection pathologically similar among those who pursue different vocations, disabling them for the performance of habitual and acquired acts, other and more potent factors than the accidents of age and sex would seem to be indicated. Hereditary predisposition in this, as in most other nervous diseases, plays an important part, and it is to be regretted that it is as yet impossible to arrive at its exact influence, from the comparative rarity of the disease, and the difficulty of acquiring exact information on this point. Yet it is not assuming too much to say that when sufficient data are obtained it will doubtless be found that any form of nervous affection in the ancestor will render the descendant more liable to the development of writers' cramp, in the same manner that a similar descent increases the probabilities of the occurrence of any other form of cerebro-spinal disease.

The most potent cause is undoubtedly over-exertion in writing. While it is certainly true that some individuals develope the disease from an amount of special exertion that appears trivial, yet such fact must not be taken as negativing the effect of the habitual performance of these restricted movements, the derangement of which constitutes the essential element of the disease. It only shows that the susceptibility of different people varies—that while in some cases no amount of exertion can bring on the disease, yet in others it may be developed by an amount of exertion comparatively insignificant.

The varying element of hereditary predisposition, in the one case strong, and in the other slight, can alone account for this discrepancy.

No difficulty need be experienced in determining the existence of writers' cramp in a given case, and in discriminating between it and the other affections, which, by implicating similar parts, might, by chance, be confounded with it. *Progressive muscular atrophy* attacks the muscles of the thumb, and in its progress may so deform and disable the hand as to implicate the power of writing; yet the course of the disease, the characteristic fibrillary contractions, and the wasting of the muscles are diagnostic points which will in all cases prevent error. Again, in *progressive muscular atrophy*, the loss of power is experienced in attempting to perform any and all acts, and is proportionate to the distinction of the muscles involved; in writers' cramp, the difficulty is confined to the execution of the one act of writing, while the muscular power is unimpaired and any other act or series of acts can be performed as well as ever. *Lead paralysis* is marked by such characteristic signs that it need never be confounded with it. The implication of both hands, the existence of paralysis and the absence of spasm, are sufficiently characteristic. The blue line on the gums which saturnine poisoning produces, the absence of contractility when the induced current of electricity is directed through the affected muscles, and the history of the case, are sufficiently distinctive of *lead paralysis* to prevent any difficulty in diagnosis. The peculiar characteristics of writers' cramp differ so widely from the symptoms of any form of local paralysis, that no error in diagnosis need be apprehended by any one familiar with the disease.

As morbid anatomy furnishes us no data from which to judge of the pathology of this disease, we shall have to resort to physiology. A consideration of the processes by which certain habitual acts and acquired powers are originally attained, will aid us in forming a conception of the manner in which disease operates to disorder them, and will enable us to judge, with some degree of accuracy, of the situation and character of the morbid process which causes the phenomena of writers' cramp.

The earliest actions of the human infant are simply reflex to impressions. The stimulus applied to the sensitive nerves is conducted to the spinal cord, excites the grey matter, and a certain amount of force is liberated; this force then passes through the motor nerves distributed to the contractile tissues near the part where the original impression was made, and the final result is a local muscular movement. Should the original stimulus be of a greater degree of intensity, it may affect additional centres in the spinal cord, and excite general bodily movements, or it may, in addition, pass to the supreme centres and present itself in consciousness. In such cases, the respondent effects will vary with the pleasurable or painful character of the ideas and feelings then induced. In the one case, the child manifests approbation, and in the other, it seeks by cries and struggles to escape from what is unpleasant. With the progressive development of the nervous system, various coördinated actions, such as crawling and walking, are attempted, and become more perfect in their operation with practice. In similar manner, as years advance, the child learns to walk, to talk and to write; its first efforts being faulty and tedious, but finally the faculties becoming automatic.

The stimulus, which in the infant may be unconscious, and manifest itself in simple reflex action, does not vanish issueless, but by exciting the activity and evolving the force of the spinal centres, necessitates a renewal of such expenditure, which is executed by the process of nutrition, and of necessity is of the nature of the force discharged. In this manner the lines of nervous transmission from the periphery through the sensitive nerves to the vesicular matter of the cord, and from thence through the motor nerves to the muscles, is rendered more easy and expeditious by each repetition. The extension of the excitation to neighboring cells, and ultimately to the sensori-motor and ideational centres, opens up channels of communication along which the passage of nervous changes becomes more frequent and easy with the increased activity and greater experience of the child.

The complex character of many of our unconscious or automatic movements can only be appreciated by analyzing certain of them. To the skilful penman, nothing is more easy and natural than writing, yet for the proper mechanical performance of the act, many different parts of the animal economy are called into activity. The sensitive surfaces of the fingers and hand must be intact, the nerve fibres connecting them with the cord, and the ascending fibres which establish relations between the spinal centres and the sensori-motor and ideational centres, must be in a condition to perform their functions. The volitional impulses must be guided and controlled by the impressions received through the sense of sight, and the spinal cord must possess a reserve force of acquired power to be set in action by the will. The condition of the muscles, their position and degree of tension from moment to moment, is an essential element, as also the integrity of the nerves which excite them to contraction, and the fibres which connect the motor nuclei of the cord with the intra-cranial organs. If the muscles are inflamed, contraction is impossible; if they are wasted, movement is impaired; if the motor nerve is disordered, paralysis is present; if the skin is diseased, sensation is perverted; if the sensitive nerve is not intact, impressions are not transmitted; and if communication between the spinal and supreme centres is interrupted, motion and sensation are in abeyance. The channels through which the volitional impulses and visual impressions reach the spinal centres, must be uninterrupted, and these latter must be the reservoirs of accumulated power, the result of previous education, in such condition as to respond regularly and promptly to cerebral stimuli.

In writers' cramp the motory and sensory endowments are intact, the nervous communication between the sensitive surfaces and muscular tissues of the arm and hand, and the spinal centres, is uninterrupted, as is also that between the spinal centres and visual and intellectual organs. Coördinated movements of every degree of complexity, and of all varieties, except those necessary for the act of writing, can be performed as readily as ever, but when the attempt is made to execute the latter, the result is a series of irregular and painful spasmodic muscular contractions.

While the volitional impulses seem to be unimpeded in their action upon the spinal centres in which exist the stored-up activity of all other acquired movements, yet some derangement has ensued in the vesicular matter, the excitement of which is essential to the act of writing. Some change in the spinal centres has so altered their texture and vital endowments, that instead of responding to the cerebral stimuli by definite and regular movements, their activity is expressed by irregular and spasmodic contractions. The amount of muscular force expended in the attempt to write is much greater than in health, but it is uncontrolled, and the resulting actions are not properly coördinated.

When there is functional derangement of any part of the nervous system without sufficient structural change to be discovered after death by our present means of examination, there is, as a general rule, during life. some alteration in the nutritive relations of the part, which is attended by derangement of the local circulation. The bloodvessels, from the constant demand for blood to supply the rapid changes incident to the prolonged activity of the part, are kept in a state of over-distention, their muscular walls become paralyzed, and the alternation of rest and activity which results from their contraction during sleep, and dilatation during wakefulness, is interfered with. As a consequence, the part is constantly excited by an excessive supply of blood, and nutritive repair does not ensue, and instead of the increased activity producing a greater development of power, as it does in health, the local congestion induces a state of abnormal irritability which results in perverted functional activity. The phenomena of writers' cramp when considered from this point of view seem to indicate that in an altered activity of certain spinal centres, in which changes in the local circulation is an important factor, we have the true pathology of the disease so far as can be determined at present.

For the successful treatment of a case of writers' cramp it is absolutely requisite that the patient should abstain from all attempts to write. Should this be done early in the disease it will occasionally be sufficient of itself to effect a cure. This is illustrated in two of the cases I have enumerated. Yet in others no amount of rest, unless conjoined with other measures, will prove efficacious. Case 3 exemplifies this fact. I was induced to employ atropia from a consideration of the pathological characters of the disease. Prolonged over-exertion of the special function of a part, tending, as it does, to produce a state of erythism with or without vascular congestion, needs for its relief the administration of a remedy whose physiological operation is to suspend the abnormal activity, and place the affected part in a state of rest. Atropia has been shown to possess this property in affections of the spinal cord, and with that idea in view, it was administered in these cases of writers' cramp.

Of the seven cases I have alluded to, two were not under my care, and in one, treatment has just been commenced, and its result cannot yet be determined. In three of the remaining four cases the hypodermic injection of atropia was the sole remedy employed, and in the other, atropia, at first alone, but subsequently conjoined with strychnia, was used in the same manner. One case passed from under observation after the third injection, and was probably not benefitted; another, after six months' treatment, was greatly improved; and the other two cases have had no return of the disease since treatment was suspended.

The best place in which to inject the remedy is beneath the skin in the loose cellular tissue over the pronator muscles of the forearm. Either extremity can be used, but when the treatment is to be continued for a length of time, it is better to inject in each arm alternately. The hypodermic syringe should be small, and armed with a gold pointed needle. The solution of atropia should be concentrated so that but a small amount of liquid need be injected at a time. The following is a convenient formula:

℞ Atropiæ sulphat., gr. j.;
Acid. sulph. dil., q. s.;
Aquæ ad. ʒj.;
M. Dose, one minim.

The injections should be administered about three times a week, and when attention is paid to the cleanliness of the needle and the due concentration and freshness of the solution, no danger of producing abscesses need be feared, if the operation is performed with a reasonable degree of dexterity.

124 *East 27th Street, New York City.*

INFANTILE UTERINE HÆMORRHAGE.

Read before the Middlesex East District Medical Society, Nov. 12th, 1872.

By HOWLAND HOLMES, M.D., of Lexington.

ON June 25th, 1872, I delivered Mrs. M. W. of a healthy female infant weighing 8¼ pounds. The father and mother were both people in good health, and there was nothing unusual in the labor of the mother, or in the condition of the infant till the fifth day, when the nurse noticed blood upon the diaper, and, on examination, found it came from the vulva. This had continued for two days when my attention was called to it, and, as the case was a novel one to me, I took particular pains to satisfy myself that blood was still flowing from the vagina, some clots being at that time between the labia. The hæmorrhage covered a period of about three days, and varied in quantity (as nearly as I could ascertain) from one to three drachms each twenty-four hours. In the meantime, both the child and its mother seemed to be progressing well, and both are in good health to-day (Nov. 12th, 1872), no subsequent hæmorrhage having occurred.

On Sept. 9th, 1872, I delivered Mrs. J. B. of a healthy female infant weighing 8 pounds. She was a primipara, like the preceding. The mother is a very healthy French Canadian, and the father as healthy a Scotchman. On the fifth day from delivery, the infant was found to have one large and several small clots of blood about the vulva, and, on examination, it was found to be still flowing from the vagina. On the seventh day, my attention was called to it. The child, in the meantime, had nursed and was thriving well, and at this time was strong and in good condition, with the exception of a cold taken on that day, which was cold and wet, in a ride of eighteen miles to get christened.

I am not aware that in my practice, covering a quarter of a century, I have met with any similar cases, and therefore report them for their novelty rather than from any important pathological considerations, for, as the first child recovered finely from a judicious forbearance from active treatment, I adopted a similar course with the second, which resulted equally as favorably. The amount of blood discharged in this case did not differ materially from the preceding, terminating, like the former, the third day from its first appearance, and there has been no repetition up to this time (Nov. 12th, 1872).

The most of you doubtless remember the remarkable case reported some months since in the *American Practitioner*, by Dr. R. P. Erwin, of Prairie Bluff, Alabama, of a "discharge of blood from the uterus of an infant, commencing when it was a month old, lasting from four to six days, recurring every twenty-eight days, and this strange phenomenon continued until the infant was eighteen months of age; it then ceased, and has not reappeared. The child is now three years old, its parents are healthy, and it has always been perfectly well."

INFANT MORTALITY IN ENGLAND.—On the occasion of opening a new hospital for children at Pendlebury (Eng.), the Bishop of Manchester gave some curious statistics on this subject. In the North of England only 7 per cent. of children under one year die annually; whereas in Manchester and Liverpool nearly 28 per cent., or nearly four times that number, die in the same period. Out of 41,805 deaths in Manchester in four years—1868 to 1871 inclusive—the number of deaths of children under five years was 20,025, or 48 per cent. "It was not," adds the Bishop, "for him to say, what he was not competent to say, to what extent—by the exercise of the powers entrusted to the municipal authorities of closing houses that were positively unfitted for human habitation—that infant mortality might be mitigated."

Progress in Medicine.

REPORT ON THERAPEUTICS.*

By R. T. Edes, M. D. Harv.

Carbolic Acid as a Local Anæsthetic.—Ollier, of Lyons *(Bull. Gén. de Thérapeutique,* 1872, Juillet ; *Centralblatt,* 1873, p. 672), relates two cases of gangrene from the application of carbolic acid. In the first case, the finger of a girl, aged 13, who had a splinter under the nail, was dipped in the acid, and then enveloped in a compress wet with the same solution. At the end of eight days, the finger was entirely gangrenous above the middle of the second phalanx. He then experimented on rabbits and fowls. The first animals, whose limbs were plunged in concentrated carbolic acid for from three to five minutes, died of poisoning in a few hours. Those who survived had gangrene. In order to prevent the poisoning, a ligature was placed around the limb previous to immersion. Five minutes of immersion then sufficed to produce death of the part.

Ollier thought that he might be able in this way to amputate fingers and toes without danger or pain, but an attempt upon the great toe failed, on account of the thickness of the epidermis.

Dr. Bill, of the U. S. Army *(Am. Jour. Med. Sci.; Boston Med. and Surg. Jour.,* Dec. 1, 1870), found carbolic acid a powerful local anæsthetic. He was able to cut down upon his own radial artery without pain, and performed several operations of similar character.

A. H. Smith *(Medical and Surgical Reporter,* 1872, p. 535) obtained similar results.

Carbolic Acid and other Antiseptics.—Wilde *(Deutsches Archiv f. Klin. Med.,* 1872, x., 55–69 ; *Centralblatt,* 1872, p. 558) communicates several cases of traumatic erysipelas in which he had very favorable results from the subcutaneous injection of sulpho-carbolate of soda. In three or four places, at the borders of the erysipelatous parts, injections were daily made with a solution of one to twelve of the amorphous salt (Schering's), after which the erysipelas disappeared on the third or fourth day.

Zapolsky *(Hoppe-Seyler's Medicinisch. Chem. Untersuchungen,* 1871) examined the effect of carbolic acid on various fermentations. Solutions of albuminous bodies are precipitated by carbolic acid only when the solutions of the latter are almost concentrated, and the reaction of the fluid neither very acid nor alkaline. Carbolic acid does not prevent the action of emulsin nor amygdalin, nor that of diastase nor of the saliva upon starch.

It hinders digestion of fibrin by pepsin the more strongly the stronger the solution; and, if carbolic acid is present in sufficient quantity, entirely stops it. In order entirely to prevent digestion, however, it appears necessary that the fluid present should consist of at least fifty per cent. of carbolic acid.

Hoppe-Seyler *(op. cit.)* concludes that the destruction of the inferior organisms (infusoria) accompanying putrefaction may be accomplished by a small quantity of carbolic acid, but that fermentations can be prevented only by a much larger quantity. In order to be perfectly sure that no inferior organisms can live in a fluid, it must contain at least one per cent. of crystallized carbolic acid. Even if putrefaction goes on slowly at this grade of concentration, yet all living organisms in such a fluid become motionless. At a strength of more than two per cent., the putrefaction also comes to a standstill, and the ferments appear to be gradually precipitated. Solutions for surgical dressings should be of at least this strength.

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* Second semi-annual Report.

Hoppe-Seyler thinks that in rules for disinfection, sufficient attention is not paid to the purification of the air in vaults, &c. He considers sulphurous acid especially applicable to this purpose, and he also recommends it, on the ground of experiment, for disinfecting bread-rooms and (army) bread-wagons. It is, of course, obtained with great ease by the burning of sulphur. Sulphurous acid is, usually, only casually mentioned in rules for disinfection, but Hoppe-Seyler would assign it the chief rank as compared with chloride of lime or carbolic acid for fluids.

Jüdell (*Hoppe-Seyler's Medicinisch. Chem. Untersuchungen*, 1868) determined that one-fourth of one per cent., by volume, of sulphurous acid is capable of destroying the life of the yeast plant in a short time, while the color of various cloths was not destroyed in twenty-four hours by one-half of one per cent., by volume. It would seem, from this, that, if infection germs possess as much sensitiveness to sulphurous acid as the yeast plant (and with carbolic acid they possess much greater), an amount of sulphurous acid may be generated in a room sufficient to completely disinfect it without bleaching the clothing and furniture.

Rabuteau and Papillon (*Comptes Rendus*, 1872, lxxv.; *Centralblatt*, 1872, p. 864) have examined the action of silicate of soda on various fermentative processes, and conclude that this salt, in two per cent. solution, prevents the alcoholic and lactic fermentations, decomposition of urea into carbonate of ammonia, and the action of emulsin or amygdalin, or delays them in a more dilute solution. The action of the silicate is more energetic than that of the borate, and the experimenters see in this fact a confirmation of the proposition stated by Rabuteau, that simple bodies are the more active the higher their atomic weight.

Roth (*Deutsche Klinik*, 1872, Nos. 40 and 42; *Centralblatt*, 1872, p. 752) supposes that he protected many persons, during an epidemic, from everything but the most insignificant attack of smallpox, by the use of one half to one dessert-spoonful of aromatic or common vinegar. Would not an "acetum sarraceniæ purpureæ cum xylolo," as combining several specifics, be a good thing?

Quinia and its Substitutes.—Briquet (*Bulletin de l'Acad. de Méd.*, 1872, No. 33; *Centralblatt*, 1872, p. 880) recommends the use of sulphate of cinchonia instead of the sulphate of quinia, for the sake of its cheapness. The cinchonia is twice as abundantly contained in the brown and red cinchona barks as the quinia. He showed, by experiments upon animals and by statistics, that cinchonia does not essentially differ in the symptoms produced, and in therapeutic effects obtained, from quinia. Its taste is far less bitter. He does not state distinctly what he supposes the ratio of the dose of the two alkaloids producing equal therapeutic effects may be, although he mentions six-tenths to one gramme (nine to fifteen grains) as the quantity to be given, in divided doses, before an expected chill. This is far from a very large dose of quinia; and it would seem that he considers the doses to be nearly the same. The proper dose of cinchonia is often stated as from one and a half times to twice that of quinia.

Mosler (*Deutsches Archiv f. Klin. Med.*, x., 159, 165; *Centralblatt*, 1872, p. 574) determined, by measurement, that eucalyptus globulus (tincture or alcoholic and watery extract, subcutaneously or by the mouth) caused contraction of the spleen. He recommends it as a substitute for quinia in the treatment of enlargement of that organ.

Dujardin Beaumetz (*Gazette Médicale*, 1872, Nos. 37, 38, 39; *Centralblatt*, 1872, p. 782) reports six cases of intermittent fever treated successfully by picrate of ammonia. The smallest successful dose was five centigrammes (eight-tenths of a grain) in five days; the largest, given in a case of tertian, twenty-four centigrammes (three and a half grains) in five days. The daily dose never exceeded six centigrammes. In all cases, permanent cure occurred after four to eight days. Attacks were not immediately cut short, with exception of the tertian. Yellow coloration of skin, prickling, disturbance of digestion, abnormal symptoms on the part of nervous centres, did not occur. The size of the spleen was not diminished. The number of cases is not large enough, nor the results decisive enough, to establish picrate of ammonia as a substitute for quinia. Picric acid and its salts have often been recommended and used before. It is well known that many mild cases of intermittent, especially in regions where the malady does not originate, yield to various drugs of little power.

Ergot.—Hildebrandt (*Berliner Klin. Wochenschrift*, 1872, No. 25; *Centralblatt*, 1872, p. 591) treated nine cases of intra-uterine tumors with subcutaneous injections of a solution of ergotin in glycerine. The most troublesome symptoms disappeared quite soon, and, after longer treatment, the tumors themselves diminished. Four times, the diminution of the fibro-myoma was determined beyond a doubt, and once it entirely disappeared. He supposes that the nutrition of the tumor is interfered with, both by a contraction of the vessels supplying it with blood, and also by the general compression it experiences from the surrounding walls of the uterus. The disadvantages of this method of treatment seem to be pain and local hardening at the points of injection.

Drasche (*Wiener Med. Wochenschrift*, 1872, Nos. 37–40; *Centralblatt*, 1872, p. 896) states that beside the hæmostatic effect of injections of ergotine, there may be observed an immediate lowering of the frequency of the pulse by five or six beats, and an increase of temperature by some tenths. From sphygmographic traces, he infers narrowing of the vessels.

Apomorphia.—Quehl (*Centralblatt*, 1872, 685) obtained from small doses of apomorphia nearly the same results as have before been stated (see Journal, Sept. 26th, 1872). The preparation used by him did not, however, lose its activity so rapidly as other authors have found it to do.

After two decigrammes (about three grains), a poisonous dose, no vomiting took place, but stupor, diminution of reflex excitability, paresis of posterior extremities, continuous *mouvements de manège.* Death never took place with this dose, and the nutrition seemed to suffer scarcely at all.

In a dog which died after three decigrammes, a marked circumscribed hyperæmia of the *pons Varolii* and the neighboring parts of the base of the brain was the only lesion observed. Vomiting, either from small or large doses, may be prevented by section of the pneumogastrics. (This fact has been denied by Riegel.)

Loeb *(Berliner Klin. Wochenschrift,* 1872, 400; *Centralblatt,* 1872, p. 720) has used apomorphia as an emetic in his practice. In a case of poisoning by oil of bitter almonds, he found it very useful, administered subcutaneously, in the dose of eight milligrammes (one-eighth of a grain). Some individuals, however, are met with who are not sensitive even to larger doses. Alarming syncope or collapse appears to be occasionally encountered, especially in children. He has seen no abscesses formed at the place of injection, but enduring and painful indurations.

Chloral and Strychnia.—Oré *(Gazette des Hôpitaux,* 1872, Nos. 103 and 104; *Centralblatt,* 1872, p. 848) was able to produce complete anæsthesia in dogs by the direct injection into the veins, of fifteen to thirty grains of chloral. The pulse increases in frequency and becomes irregular, and in five minutes at most the animal appears lifeless, with the exception of certain reflex movements. The larger the dose, the more rapid the onset of the symptoms. Strychnia being given at the same time, in a dose somewhat but not too much exceeding the fatal, he succeeded in one case in saving the animal. If the dose were too large, life was prolonged for some hours. On these grounds, he recommends the injection of chloral into the veins in cases of tetanus.

He does not, however *(Journal Anat. and Phys.,* Nov., 1872), find that strychnia is an antidote for chloral, although it postpones the fatal result in some instances.

Turner *(Med. and Surg. Reporter,* xxvi., 1872, p. 529; *Centralblatt,* 1872, p. 560) reports the case of an Indian, who took something bitter in his food, and soon after was attacked with spasms, chiefly of an opisthotonic character. He gave thirty grains of chloral at the first attack after seeing him, and seventy-five grains in about an hour and a half. The spasms then ceased for several hours, and thirty grains were again given, after which there was no return of the cramps, and the patient recovered completely.

Fergusson *(Edinburgh Medical Journal,* July, 1872; *Centralblatt,* 1872, p. 624) reports a case of traumatic tetanus successfully treated by one hundred and eight grains of hydrate of chloral and sixty-eight grains of bromide of potassium, per diem, in three doses. This was continued for four weeks. The tetanus was cured before its probable cause, a small sequestrum in the cicatricial tissue of a stump, was discovered and removed.

Lactic Acid.—Dr. Ogle *(Medical Times and Gazette,* 1872, ii., 1156; *Centralblatt,* 1872, p. 607) has treated two cases of diabetes with lactic acid without benefit. (Compare report on lactic acid in this JOURNAL, 1872, Sept. 19th.)

Hydrotherapeutics.—Riegel *(Deutsches Archiv f. Klin. Med.,* 1872, x., p. 515–530; *Centralblatt,* 1872, p. 879) recommends local absorption of heat in typhoid by means of ice-bags to the back and on the abdomen. He says this method is more agreeable and less troublesome to the patients, and diminishes the average daily temperature in the axilla, more than full baths of 66° temperature and ten minutes duration every two hours.

(To be concluded.)

Reports of Medical Societies.

SELECTIONS FROM THE RECORDS OF THE OBSTETRICAL SOCIETY OF BOSTON.

W. L. RICHARDSON, M.D., SECRETARY.

MAY 11th, 1872.—The President, Dr. Read, in the chair.

Purpura Hæmorrhagica in a New-born Child.—Dr. Sinclair said that four weeks since, he was called to a case of labor which was completed in twenty-eight hours. The next day, black and blue spots appeared on the left shoulder and under the arm of the child, and there were a few small, extravasated spots on the legs, which were soon followed by others. Later, hæmorrhage began from the groins; the next day, from the navel. By the free use of styptics, the hæmorrhage was arrested, but returned the next day from the groins, and ecchymoses appeared on the body. Discharges of blood also took place from the bowels. At birth, the child had appeared well nourished. There was no jaundice noticed in the case. Death took place on the fifth day.

Pelvic Cellulitis.—Dr. Curtis reported the following case of pelvic cellulitis.

E. S., aged 28, was admitted to the City Hospital June 23, 1871. She had been married ten years. Soon after her marriage, according to her own report, she contracted a disease from her husband. She subsequently had four dead children. Six weeks before entrance, she aborted, during sleep, of a 3½ months fœtus. She flowed for a month, at the end of which time the placenta was expelled. About ten days later, she began to have pains in her left side, just above Poupart's ligament.

At the time of her entrance to the hospital, she was unable to make complete extension of the left knee. The catamenia were regular.

An examination showed an old rupture of the perineum. The cervix was turned back towards the sacrum, and was large, broad and tender. The uterus was fixed. The abdomen was prominent with adipose tissue. Tenderness slight in the right lumbar, and considerable in the left inguinal region. A firm, inelastic swelling, tender on pressure, was felt in the left inguinal region. The uterus was anteflexed in anterior and right *cul-de-sacs*. Some fulness existed in the left *cul-de-sac;* pain on pressure. In walking, the patient favors the left leg.

July 12.—Vomiting freely. Catamenia present, lasting till 17th.

July 18.—Considerable tenderness on left side of the abdomen, as high as a line drawn from navel to superior spine of ilium, with fulness and resistance on pressure more marked than heretofore. Pressure on crest of the ilium gives considerable pain. In the left lateral and posterior *cul-de-sac*, a deep-seated, tender mass was detected. In the rectum, an ill-defined and very tender mass was felt lying to the left of the uterus.

During the next three weeks the tenderness and fulness increased, accompanied by severe pain, vomiting and diarrhœa.

August 18.—The local swelling in the left groin seemed to be increasing.

August 21.—Fluctuation was evident in the left groin. The diarrhœa still continued at times. No pus was discharged.

August 24.—The groin was lanced by Dr. Blake, the incision being followed by a rapid, noisy discharge of fœtid gas and a pint of fœtid pus. In the evening, half a pint more was discharged.

From this date, the abscess continued to discharge. The diarrhœa also continued, the dejections containing considerable pus.

Subsequently, two more openings appeared below the first. The patient gradually sank, and died on the 11th of September.

Dr. Abbot said it was remarkable how well many of these cases do. He had had six or eight under his care, all of which had recovered. In one case, the abscess had opened in the right iliac region as well as the vagina, and discharged a long time, reducing the patient to the lowest degree of emaciation. In another, pus was discharged with the urine for several months; yet both of these cases were at the present time perfectly well,

Dr. Sinclair said that the mortality in these cases was supposed to be between five and six per cent. He thought it was much larger.

Dr. Curtis said that the patient, also with pelvic cellulitis, in the bed next to the one whose case he had reported, seemed at the time a much siçker woman, but she recovered perfectly, while this patient, who at first promised well, had died.

Dr. Curtis having asked as to the frequency of anteversion of the uterus, Dr. Minot said that, according to his observation, anteversion usually gave rise to much less difficulty than retroversion.

Dr. Abbot said that in a case of anteversion, under his care, the patient was obliged to pass her water every few minutes.

Scarlatina in Old Age.—Dr. Treadwell had seen a case of scarlatina, recently, in an old lady 73 years of age. The characteristic eruption was confined to the thighs and knees. The affection of the throat was well marked.

Dr. Treadwell also said he had removed a fibrous tumor, weighing 14 pounds 12 ounces, from a woman 58 years of age,who had died recently. It had existed for twenty five years, and was partially covered with a calcareous deposit of from two to eight lines in thickness, situated in the fibrous structure, just beneath the investing peritoneum. In several places it had broken down. Its development was in the anterior wall of the uterus.

Sub-involution of the Uterus, with no Uterine Symptoms.—Dr. Minot stated that a woman had recently died under his care, in the Massachusetts General Hospital, of pneumonia, who had given him no history of any previous uterine symptoms. At the autopsy, unmistakable evidences were found of recent inflammation of the Fallopian tubes, and the uterus was a perfect specimen of sub-involution.

Case of False Pregnancy.—Dr. Read related the following case.

The patient was a woman, 38 years of age, and the mother of six children. She had also had two miscarriages. Her last child is 5 years old. She menstruated, for the last time, May 20th. In June, being obliged to do some unusual work, there was a slight flow, resembling the regular catamenial discharge. This came on again in August, and lasted a few days. Since then it has returned every three weeks. About the first of November, she began to increase in size. About three weeks later she quickened, as she supposed; Dr. Read saw her at varying intervals; the abdomen was constantly increasing in size, and she reported that the movements of the child were becoming more active. At the end of nine months Dr. Read was called, the patient supposing herself to be in labor. He found her in considerable pain, and the movements of the child were reported as very marked. No fœtal heart could be heard, nor could any distinct tumor be made out. No fœtal movements could be detected, even when the patient reported them as most marked. The time having passed by when her pregnancy should have terminated, a uterine sound was passed into the uterus from four to four and a half inches. No discharge followed its withdrawal. No fulness could be detected in any part of the vagina, except in front, where, very high up, some body could be very indistinctly made out. Drs. Putnam and Miller saw her in consultation. By careful manipulation, the abdominal walls were compressed to the side of the spine, by which it was rendered certain that no tumor existed in the abdominal cavity. The patient has already begun to diminish in size, and the supposed fœtal movements are reported as subsiding.

Large Child.—Dr. Minot said he had lately attended a lady, whose child, when dressed, weighed but a trifle less than fifteen pounds.

Abstracts and Intelligence.

Hints on Epilepsy.—The *Medical Times and Gazette*, October 26, 1872, discusses, under this heading, the various theories concerning epilepsy and the remedies suggested for it. A bare enumeration of these theories, from the demoniacal possession of the old Greek and Arabian writers to the cerebral anæmia which is now advocated by Dr. Dickinson, would suffice for an extended article, and the same may be stated concerning the list of drugs and remedial measures advocated by different physicians, in accordance with some pet or fashionable theory, or as the outcome of their own experience. If anything is at all clear in this chaos of conflicting theories and opposing methods of medication, it is that what is called an epileptic fit, or an epileptiform convulsion, is nothing more than a symptom which we must refer to some ultimate common cause, or common condition of nervous matter, either of brain, spinal cord, or of sympathetic ganglia ; yet a symptom which may be induced by a great variety of toxic agents, and apparently dissimilar pathological agencies.

Perhaps our earliest experience of convulsions is associated with imperfect aëration of blood, as in half-born or newly-born infants, in whom the lungs are as yet but imperfectly expanded, or in whom there is some mechanical impediment to full and perfect respiration. A little reflection will show us that these are very closely allied to the convulsions which occur in whooping-cough, and sometimes in pneumonia, bronchitis, spasmodic asthma, and to those induced in suffocating animals by throttling, hanging, choking, &c. Closely allied are the convulsions met with in infants suffering from congenital cyanosis, whatever be the malformation upon which the mixture of venous and arterial blood depends. Not improperly we may class with these the convulsions which so commonly occur in those forms of heart disease—such as tricuspid regurgitation or dilatation of the right heart—in which the free circulation of the blood in the lungs is especially hindered. With these, we may class many toxic agents which cause death either by spasm of the glottis, or by sooner or later impeding the free aëration and circulation of the blood. Such are Prussic acid, chloroform, carbonic acid, and a host of others, together with opium and the numerous narcotics and sedatives which probably act in the same direction, although less obviously and more slowly. It would be rash, however, to build hastily upon this foundation the theory that the cause of epilepsy is to be referred to a want of oxygenation or, in other words, of aëration of the blood; for convulsions and epilepsy are met with in various conditions where this is very slightly or not at all interfered with.

We find convulsions caused by hæmorrhage; it may be from the funis in the infant, or in such cases as obstetricians and surgeons are familiar with in patients further advanced in life. In many of these cases there is no adequate clinical proof of a stasis of the pulmonary circulation, although there may be good reasons for believing in a deficient supply of blood—for the moment at least—to the brain. Shall we class with the latter cause the convulsions which are met with so frequently in dilated conditions of the heart's walls—such as are very common in patients with dilated left ventricle?

To return to our infant once more; we find him apt to be convulsed at the onset, in the course and at the end of almost all acute diseases, notably of the exanthemata. But a burn or scald, the eruption of a fresh tooth, the deposition or disintegration of a tubercular or syphilitic deposit, or the presence of some malignant or rapidly-growing tumor of his cerebrum, cerebellum, or adjacent parts, will excite him in an equally disagreeable manner. There is strong clinical evidence that the older writers were correct in assigning convulsions to the irritation produced by intestinal worms of various kinds. Adults are not exempt from the operation of similar causes. The various mineral poisons, as well as many vegetable ones, whose exact *modus operandi* is still unknown to us, are productive of epilepsy. Animal poisons, also, and (perhaps from the same cause) the effects of extreme heat, of extreme cold, of sections of nerves, and of obstructing or preventing the action of the skin, are equally well known as tending to produce convulsions of an epileptic type; so is the presence in the blood of urea, uric acid, of altered biliary acids, or other hepatic products, and even of the injection into the veins of the blood of another animal. The ill effects of some articles of diet, of mental emotion and moral shock, of over-study or long-continued exertion of the mind, must be remembered. Sexual causes must properly be classed here, unless we consider these due to the anæmia so often induced, or as the result of reflex irritations or local congestions.

The list of exciting or apparent causes is by no means exhausted. Perhaps, for clinical purposes, such a grouping as the following might be of use, even though many exciting causes would thus unavoidably be claimed by several of the groups.

We shall class convulsions and epileptic seizures, as to causation, in such a grouping as—First, due to direct toxic agents (animal, mineral and vegetable poisons, diseased conditions of blood—as met with in the exanthemata, syphilis, gout, and the like—including articles of diet or drinks when taken in excessive quantities, or when themselves impure or deleterious); Second, all causes of imperfect aëration of blood, whether heart or lung disease, or mechanical or other causes which impede or prevent the access of blood to the lungs, or the due oxygenation of blood in the tissues; Third, losses of blood or other fluids, causing direct general or local anæmia, and local congestions or obstructions which may induce anæmia of nervous centres; Fourth, local causes of irritation, whether acting as direct excitants of nervous and muscular action through or upon nerve centres (worms, teething and tumors, &c.); Fifth, other causes not classified (here mental and moral shocks, perhaps).

Can we classify the remedies, real or assumed, in a similar manner, or in any clinical relation to the above groups? We think we can. The remedies which fall under the first class, and which may be ranked as antidotes, are the following:—If the cause is malaria, quinine, barks of various kinds, arsenic, bromides and the like; and, in a minor degree, opium, mineral acids and many of the sulphates. If the poison is of gout or syphilis, colchicum, veratria, squill, digitalis, and the like for the former, and mercurials, iodide of potassium and its compounds for the latter. If lead or mercury is the cause, then the iodides, and perhaps the sulphates, and potassium-chlorate, with alkaline sulphides, and baths come to our aid.

It is extremely probable that most of the mineral tonics—silver nitrate, zinc salts and the like, as well as the ferruginous remedies which were for so many years fashionable for the relief or cure of epilepsy—owed, or owe, their success to their properties as antiseptics or disinfectants by virtue of their powers of combining with albuminous matters, and of resisting decomposition; or perhaps, like quinine, to their property of limiting the amœboid movements of white blood-corpuscles, or of other animal cells or cellules. Once admit this, and our difficulty in reconciling the apparently opposite qualities of a host of drugs will vanish. Creasote and carbolic acid, ammonia, alcohol, ether and chloroform, will all claim to be ranked in this category.

Under the second class, come change of air, of diet and of occupation; remedies which relieve congestion—as purgatives and bleeding, diuretics and diaphoretics, and such as act upon the nerves of the heart or lungs—notably digitalis, hyoscyamus, the bromides, ether and chloroform; and such means as cod-liver oil, or phosphorus and its compounds.

In the third category, all the means of arresting hæmorrhage, and all the means of making fresh blood or improving the old—hæmatinics and the like—and even rest, are deservedly placed.

The forceps of the dentist, chlorodyne, oil of male fern, and other anthelmintics, sedatives, and whatever may either remove or soothe the local peripheral irritations which disturb the nervous centres, must be placed in the fourth class.

Our fifth class of causes of epilepsy, as it is vague and wide enough to include all the unknown causes, should also include all those wonderful and inert specifics which succeed only in the hands of their own inventors. The tractors of a Perkins, the marvels of mesmerism, hypnotism, and a hundred things as generally useful as cundurango, or uric acid of a boa, may rest in a happy, if not over-clean community.

The Generative Expenditure of Man.—H. Alleyne Nicholson, M.D. (*The Edinburgh Medical Journal*, October, 1872), discusses the influence of the generative expenditure upon man as compared with other animals.

It has long been admitted that longevity is, in a general way, opposed by the expenditure of force and matter requisite for the perpetuation of the species. It is also opposed by the loss of force and material caused to the organism by the exertions which it has to make to live as an individual. Longevity is, therefore, opposed by the *generative expenditure* of the organism on the one hand, and by its *personal expenditure* on the other. It is the purpose of the article to show that man stands in a very different position to all other animals, as regards the influence of his generative expenditure upon his period of existence as an individual.

It has been generally assumed that the organism is protected by a kind of balance, which is usually maintained between its generative and its personal expenditure. This law is usually true, even of man; great personal exertion, whether physical or mental, reducing both sexual desire and the power of sexual gratification. To this law, however, there are, occasionally, striking exceptions.

Speaking generally, the losses to the organism caused by re-production come under two heads:—1st, the actual loss of the matter of life involved in the manufacture and discharge of the generative products; and, 2d, the loss of nervous energy involved in the generative act.

In the case of the lowest forms of life, we may presume that the generative expenditure is limited to that comprised under the first of these heads. The loss is often so great as to destroy the organism. In the higher animals, the loss comes under both heads, and there is reason to believe that those under the second are greater in male animals than in female.

Confining our attention to the mammals alone, it is clear that, except in the case of man, there is one great safeguard by which the generative expenditure is kept from rising above a certain level, which we may believe to be the one most consistent with the interests of the species. This safeguard is found in the fact that, in the state of nature, the female will only admit the male at certain limited periods, which are usually very regular in their occurrence and very short in point of duration. It follows that the males are free from all forms of generative expenditure for comparatively long periods. The losses to the females, caused by the maturation of the ova, are also limited in the same way to different periods, usually separated by long intervals of rest.

The most important point, however, is that, taken as a whole, we may regard the generative expenditure of animals solely as a tax upon the organism, rendered requisite by the necessity that the species should be perpetuated.

Comparing men with the other mammals, the first and most striking point of divergence is, that the female admits the male at all periods, except the brief intervals occupied by the process of menstruation; and even this restriction is not universally observed. As the menstrual periods in a healthy woman occupy at most but one week out of four, the generative expenditure of the male is extended, during adult life, over nine months in the year, or three-fourths of his sexually mature existence.

In the second place, as union between the sexes takes place during the period of gestation, it follows that a large amount of the generative expenditure of man, unlike that of any other animal, *has no direct bearing whatever upon the perpetuation of the species.*

Thirdly, this extra generative expenditure is just as important in its bearing upon the individual as if it were directed to the main and primary end of the generative expenditure of man.

Fourthly, the generative expenditure of man, as a monogamous animal, is, as a rule, continued long after the period at which the female ceases to produce ova, and consequently long after the time during which the perpetuation of the species is subserved.

Fifthly, it may be considered as probable that the loss of nervous energy, apart from the actual loss of the generative products, is a more important item in the case of man than in that of any other animal.

Sixthly, so far as the female is concerned, the generative expenditure is not confined to the maturation of the ova, but is also accompanied by an actual loss of blood, as is the case with no other mammals, except a few of the higher quadrumana. Not only is this the case, but the ova are produced at more frequently recurring periods than is the case with the lower animals.

From the above, it is evident that there is an apparent enormous waste of power in the method in which the generative function is carried out in man, the waste being greatest in the male, but existing in the female as well. The male is subjected to a drain of nervous power and of the matter of life which is practically nearly constant, and from which the other male mammals are free.

The generative expenditure of man is so excessive, as compared with that of other mammals, and must be so disadvantageous to the species, if we regard man as a *mere animal*, that it is impossible to believe this state of things could ever have been brought about by the process of natural selection. If man were ever, in his earlier stages, restricted in this respect, as the other mammals are, it is impossible to believe that the change to his present high generative expenditure could have been beneficial to him *as an animal;* and unless it were so beneficial, the change could not have been effected by the agency of natural selection. It is very difficult to see, also, how either natural or sexual selection could account for the loss by the human female—if primarily endowed with it—of the instinct which leads all female mammals, in the wild state, to reject the caresses of the male except during the breeding season.

Taking man as we at present find him, it is quite clear that the generative function plays in his life an essentially different part from that which it plays in the life of any other mammal. Since in all other animals the generative function is wholly connected with the perpetuation of the species, while man is subjected to a generative expenditure which may be characterized as enormously in excess of what is required for this purpose, we must believe that we have, in his case, either an entirely unnecessary waste of power, or that some other end is subserved than that of the continuation of the species. What this end may be is open to question. We cannot but believe that the excessive expenditure is compensated by some advantage to man of at least equivalent value.

Lastly, there is to be considered the probability that man stands alone amongst the mammals as regards the laws which regulate the effect of his generative expenditure upon his longevity.

This is a subject upon which it is impossible, at present, to state anything positive. Taking mammals in their *wild* state, it is certain that man is subjected to an unusual generative expenditure; and, if no new law supervene, this certainly ought to have some unmistakable effect upon his longevity. Such statistics as we have, however, go to show that the average longevity of the married is greater than that of the celibate. It would seem probable, then, that the effect of man's excessive generative expenditure—as compared with that of mammals—upon his longevity is neutralized by some compensating cause. Abnormal instances drawn from animals, such as monkeys living in confinement, should not be accepted in the determination of this question.

Dr. Nicholson states, in conclusion, that his paper refers solely to man in his normal and healthy state, and in no way refers to those abuses of the sexual functions, which, unfortunately, form a distinctive feature of the human species as compared with the lower animals.

THE STRUCTURE OF THE WHITE BLOOD CORPUSCLE.—The *Lancet*, Feb. 8, 1873, contains a notice of Dr. Richardson's paper upon this subject, reprinted from the Transactions of the American Medical Association. Dr. Richardson advances the opinion that the salivary corpuscles are in reality migrating white blood corpuscles, that have become distended by endosmosis of the salivary fluid. He states that the German histologists, Stricker and Rollet, do not accept as proved the existence of a distinct cell-wall in the white blood-globule; that they consider the laws according to which leucocytes take up fluid as unknown, and that the molecular or "dancing" movement in the salivary corpuscles differs from that seen in colorless blood, pus and other corpuscles, in that those movements cease in the former, but continue in the latter on the addition of a half to a one per cent. solution of common salt. Dr. R. considers the following additions to have been made to what was already known. The white blood-corpuscle is a cell composed of a nucleus (or nuclei) which possesses the power of independent amœboid movement, and is insoluble in water, but capable of slowly imbibing that fluid until swollen to nearly double its normal size. The cell-wall of the corpuscle is a membranous envelope, insoluble in water, even when boiling, too thin to exhibit a double contour, even when under a high magnifying power, but firm enough to restrict the movement of its contained granules within its limits. Some of the phenomena observed would lead to the supposition that this membrane is dotted with minute pores which permit delicate threads of the soft protoplasm it encloses to be extruded. The structure of the particles existing in the protoplasm, and exhibiting dancing motions, when the latter undergoes dilution, is yet undetermined. Contrary to the views of Stricker and Pflüger, no essential difference exists in the effects of salt solutions of various strengths upon the salivary, pus and white blood-corpuscles. From this circumstance, in conjunction with the fact observed that the salivary globules, when acted upon by the denser liquid, contract to the size of the blood-leucocytes, and manifest amœboid movements, Dr. R. concludes that the corpuscles of the saliva are "migrating" white blood-globules, which, "wandering out" into the oral cavity, have become distended by the endosmosis of the rarer fluid in which they float. He thinks it possible that further investigation of the revolving motion sometimes (not always) produced by a solution of ferrocyanide of potassium in the white blood-corpuscles may throw light upon the curious rotatory movement in the cells of certain plants, which has for a long time been deemed inexplicable, and, by a late writer, attributed to the presence of cilia upon the inner surface of the cell-wall.

Retention of Urine caused by a single diseased Kidney situated in the Pelvic Cavity.—J. W. S. Gouley, M.D. (*The Medical Record*, Oct. 15, 1872). The patient, a male, æt. 24, was admitted to Bellevue Hospital, Sept. 20th, 1870. Three days before, he had pain in the hypogastric region. On the following day, he had retention of urine, for which a catheter was passed, but as no urine flowed it was the opinion of several practitioners who saw him that the bladder had not been reached. In the evening of the second day, the patient being unrelieved, the operation for puncture of the bladder through the rectum was done. Not much urine flowed, and the canula was withdrawn. On the afternoon of the third day, he was removed to the hospital, and came under Dr. Gouley's care. A large bougie and afterwards a No. 10 silver catheter was passed into the bladder, and eight ounces of urine were drawn off; but the hypogastric enlargement did not subside. By rotating the catheter, it came in contact on the right with a resisting object, which seemed to have pushed that wall of the bladder almost to the median line.

The opinion was expressed that the tumor was extra-vesical, and had encroached upon the cavity of the bladder to the extent of giving rise to the urgent symptoms of retention. Peritonitis set in, and the patient died on the third day after admission to the hospital.

The autopsy revealed general peritonitis, most marked in the pelvis, where the organs were glued together. No kidneys were found in the lumbar regions, and no renal arteries were detected in the usual place. Within the pelvis, and rising above the brim, between the sacrum and the bladder, more to the right than to the left, was a tumor, the size of a child's head, filled with fluid. The dissection revealed that it was supplied with blood from the middle sacral artery, which was much enlarged. There was a large single vein emerging from the tumor, and emptying into the ascending cava. A healthy, undistended ureter was traced from the hilus of this single and abnormally placed diseased kidney to the bladder. The bladder presented no morbid appearance other than a few punctate spots of congestion in its mucous membrane, and there was no evidence of puncture at any point. The parietes of the rectum were greatly thickened. Through its anterior wall, two and a half inches from the anus, there was a punctured wound, which was traced into the substance of the kidney and its distended pelvis, the trocar having passed to the right of the bladder without wounding it.

This case is extremely instructive anatomically, physiologically and pathologically. The paper considers it chiefly in its surgical aspects. There was not only retention of urine in the bladder, but also in the pelvis of the kidney, which latter was caused by compression of the short ureter, partly by the tumor itself and partly by the distended bladder. Whenever the patient changed his position to the prone, the tumor would be thrown forward and out of the pelvic cavity, relief of the bladder following, the pressure upon the ureter would be removed, the urine would again gush into the bladder, and, as this filled up, retention of urine in the renal pelvis would again occur.

The frequent recurrence for months, perhaps for years, of retention of urine in the bladder probably gave rise to this extreme distention of the pelvis of the kidney. Had the patient often assumed the prone position he would doubtless have obtained more relief, and perhaps his kidney would have remained normal, but its situation in the pelvic excavation was never suspected. Anatomists have occasionally found one or both kidneys in this locality; but, so far as Dr. G. knows, this anomalous position of the organ has never caused retention, and the case may, in this respect, be considered unique.

The signs by which such a mal-position of the kidney could be discovered, when, as in this case, there is retention of urine, would be:—1st, pain in the hypogastric and sacral regions, also the perineum and rectum, with a sense of weight, and, perhaps, tenesmus, even after successful catheterism of the bladder; 2d, absence of pain in the lumbar region; 3d, dulness in the hypogastric region; 4th, absence of renal dulness in the lumbar region on careful auscultatory percussion; 5th, no subsidence of the hypogastric tumor after successful evacutive catheterism of the bladder.

The important lesson learned from this case is, that the attempted operation of rectal puncture of the bladder—which gave rise to fatal peritonitis—was resorted to under the impression that the whole trouble was retention of urine in the bladder from obstruction of the urethra, and this conclusion seems to have been arrived at without proper exploration of the canal. Had a bulbous bougie been passed, as the first step of mechanical exploration, the canal would have been found permeable to the largest instruments; puncture of the bladder would not have been entertained for a moment, and possibly a correct diagnosis would have been made.

Dr. Gouley concludes his paper with a consideration of the proper treatment of such a case when a correct diagnosis has been made.

A Case of Atlo-Axial Disease. By J. T. Rothrock. *(Phil. Med. Times*, Oct. 19, 1872.)—The patient was in early manhood. He had suffered during the previous year from trouble of a rheumatic character, and then from an œdematous condition of the left foot. After an incision, a fungous growth arose from the cicatrix, and persisted for some months. These antecedents show how much predisposed, by a lowered vitality, the patient was to a development of any disease which diathesis or accident might call into open manifestation.

At this juncture, his troubles culminated in one still more aggravated. His neck became stiff, and so much swollen that the hollow existing in the occipito-cervical region disappeared. For this he went through a heroic course of cupping, blistering, &c., under the idea that the trouble was merely local. The symptoms continued for several months.

Oct. 21, 1870—When first seen by Dr. R., the most urgent symptoms were those of tonsillitis; these were soon relieved.

Oct. 31.—He was prostrated with a fearful increase of his previous sufferings. The tonsils were enormously swollen, the half arches œdematous to the highest degree, and the uvula, enlarged and tumefied, completely blocked up the entrance to the pharynx. The posterior nares were so closed that it was only possible by supreme efforts to breathe through them, and then only after lumps of hardened mucus had been expelled. The tip of the finger, pressed against the back of the pharynx, received the impression of touching a sodden mass. The œsophagus was nearly closed, and, occasionally, spasm of the glottis jeopardized the life of the patient. To crown all this suffering, agonizing pain would shoot up the back of the neck and head, which the patient compared to a blow received on the back of the head from a sledge-hammer—a symptom which Dr. R. came afterwards to regard as of diagnostic value. When in the erect position, the hands were applied one to either side of the occipito-cervical region, to support the head and to relieve its inflamed base.

It became necessary, in making the diagnosis, to eliminate pharyngitis, the previous rheumatic attack, retro-pharyngeal abscess, any specific disorder and erysipelas of the mucous surfaces.

The most probable diagnosis was that there was a breaking down of the bony structures. There was no evidence of pus pointing in a visible location, external or internal, nor did it appear to be gravitating down along the spinal column.

The temptation at times was strong to make a free incision just below the mastoid process, being aware that pus forming among the deeper structures of the neck would, for a long time, give no external indication of pointing. The statement of Chelius, that there is not usually any external diseased indication in the neck when its bones are diseased, except that the patient cannot bear the least pressure, served to confirm the diagnosis.

Treatment of a tonic and supporting character was determined upon. It consisted of rest in bed, with the head supported and buried in a bran pillow, which acted as a splint, and which, when warmed, served greatly to mitigate the pain; generous diet and tonics, ferri vinum amar., tr. nucis vom., and Fowler's solution in combination, alternated with cod-liver oil and iodide of iron; and they were pushed to the full extent of the patient's tolerance. In a few days, decided improvement was evident.

Dec. 3.—Two small protuberances were noticed on the back of the pharynx; they were similar to the fungoid mass one finds over the fistulous openings to carious bone elsewhere. It became certain that the case was one of vertebral caries. Mild counter-irritation was maintained over the back of the neck.

Dec. 12.—Two small pieces of bone escaped from the openings beneath the fungoid granulations in the posterior wall of the pharynx. One was secured, the other was lost. The cause of all this intense, long-continued suffering seemed ridiculously small compared with the effects produced. The piece of bone secured was not more than one-sixteenth of an inch thick, and less than one-quarter of an inch square surface. The piece lost was, in all probability, even smaller. It was believed at the time, and afterwards ascertained, to be the small process in front of the atlas called the tubercle. Nearly a year later (Sept. 5, 1871), after a period of comparative quiet, the neck again began to swell and the pharynx to become tumefied. A new portion of dead bone was secured, which was the polished surface of the atlas against which the anterior portion of the odontoid process rubs. Sept. 13th, another small piece was obtained.

At present, the patient seems to enjoy fair health. There is some swelling of the back of the neck, some huskiness of the voice, depending on pharyngeal changes, and some stiffness of the neck. At present, it may be best to hazard no opinion as to the permanency of the cure, as this depends on so many contingencies.

VACCINAL SYPHILIS.—Great commotion has been recently raised in the English medical societies by Mr. Hutchinson, who reports several cases, thought by himself and others to be undoubted instances of syphilis induced by vaccination; but, after a somewhat careful reading, we must say, in the words of the old Scottish verdict, "not proven." To settle such a grave question, there surely ought to be required more than what the *Lancet* calls "the very small number of facts which so keen a clinical investigator as Mr. Hutchinson, with an enormous field of observation at his command, has been able to detect." The following extract, also from the *Lancet*, ought to be well considered before hastily adopting the conclusions of alarmists.

"We think, then, that the influence of the whole group of cases related by Mr. Hutchinson must be decidedly in favor of the *possibility* of communication of syphilis by the inoculation either of the blood of a syphilitic vaccinifer, or of the serum which oozes into the vesicle, *if the vaccinator be unwise enough* (these and the following italics are not in the *Lancet)* to continue to take fluid after the first drop of lymph—the true product of vaccination—has been exhausted. *Not one particle of evidence has been adduced to show that the true lymph can be affected with syphilis*; and, as our readers are doubtless aware, the evidence against such a possibility is enormously strong. And even the communication by blood, or by serum obtained after first emptying the vaccine vesicle, though it may now be admitted as a possibility, cannot for a moment be regarded as more than a very occasional result of these accidents. We are very glad to observe that Mr. Henry Lee had the sense and candor to point this out forcibly on Tuesday. He observed that, supposing constitutional syphilis to be communicable by blood or serum, it was plain that this was no necessary process, but only happened when the constitution of the person from whom the inoculation was received chanced to be in some peculiar state of ferment, which received the dormant activity of the syphilitic poison. This must certainly be true, or syphilis would be far more widely diffused in the world than it actually is. By these arguments it is evident that we reduce to a minimum the chances of vaccinal communication of syphilis; for the latter event *can only take place* when all the following conditions are simultaneously present:—(1) a syphilitic vaccinifer; (2) an active condition of the syphilitic element of the vacciniser's blood; but, at the same time (3), an absence of such external symptoms of syphilis as would deter any commonly upright surgeon from using the subject of them as a vaccinifer; (4) the gross imprudence committed, of employing either blood or the serum obtained after the emptying of the vesicle. It is an absolute impossibility that all these conditions can be more than very rarely fulfilled, and we therefore think that Mr. Hutchinson is gravely to blame for the tone of his remarks in his concluding speech at the meeting. Those remarks, when translated by the imperfect understanding of the non-medical public, will convey a most erroneous impression as to the prevalence of vaccino-syphilis, and will aggravate in a perfectly unwarrantable manner the terrors of the laity."

On the use of Muriatic Acid in Fevers. By Dr. A. P. Buchan, Senior Physician to the Westminster Hospital.*—The use of muriatic acid in fever was first introduced into the Westminster Hospital on the suggestion of Mr. Sutherland, a respectable apothecary, residing in Westminster, in consequence of his having witnessed its efficacy in low fevers, occurring in the parish workhouse, of which he formerly had charge.

It is, however, no new medicine, although, like many other valuable remedies, it has been alternately in vogue and forgotten. The introduction of a new medical theory often expels a valuable article from the materia medica; a circumstance much to be regretted, as, in my opinion, a remedy, the utility of which, in any one complaint, is sanctioned by experience, is of more real importance to the welfare of mankind than all the medical theories that have been broached, taken together.

The earliest account that I have met with of the muriatic acid being used as a remedy is contained in a scarce pamphlet now lying before me, published in 1667, and entitled, "Alexicacus' Spirit of Salt of the World, which, vulgarly prepared, is called The Spirit of Salt, or The Transcendant Virtue of the True Spirit of Salt, long looked for, and now philosophically prepared and purified, &c. By Constantine Rhodonaces, Grecian, of the Isle of Chios, and one of his Majestie's Chymists; who is the sole Author and Inventor of this Spirit." The author is, of course, full of the praises of his nostrum, the preparation of which, in the then state of chemistry, was probably known to few. It is, however, a fact, that during the great plague in London, he was a most successful practitioner, and is said to have accumulated a large fortune. To use his own words, "The Author, by using his spirit in drinks, broths and sauces (staying all the time of the pestilence in London), kept, by God's grace, not only himself and family, but also many others, during all the contagion of the plague." He also observes that "it makes men agile, merry and jocund, procuring moderate sweating and gentle sleep."

Outwardly used, "it answers well to cleanse foul ulcers, and render the skin clear." The dose he recommends is much the same as is used at present, from sixty to eighty drops in twenty-four hours.

From this period, as a remedy for fever, it seems to have fallen into disuse, till it was revived in a pamphlet published by Sir W. Fordyce, in 1790, who strongly recommends it in all diseases having a tendency to putridity, as typhus fever, malignant smallpox, measles and sore throat; and is sanguine in his hopes of its proving an effectual remedy for the plague itself.

Since that time, a medicine was introduced into the military hospitals of Prussia, as a secret, for the cure of fever; after a fair trial, and approbation of the army physicians, the secret was purchased by the King, and it turned out to be a diluted mixture of muriatic acid.

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* Messrs. Editors,—Enclosed I send you a copy of an article on the use of muriatic acid in fevers, which was written over half a century ago. It seems to me to be worth reproducing, and if you are of the same opinion, you will please give it a place in the Journal. Yours &c., W. H. Campbell, M.D.
Boston Highlands, *Dec.* 9, 1872.

In a collection of medical tracts, published at Calcutta, about twenty years ago, there is a paper containing an account of a ship's crew being completely preserved from scurvy during a three years' voyage, by the use of muriatic acid, and as soon as the stock was exhausted, the complaint appeared with great virulence.

I remember, some years ago, being called to see a patient in the neighborhood of Drury Lane, whom I found lying insensible in bed with a low fever, and covered with petechiæ (the spotted fever, as it was termed). The case appeared to me desperate, but I desired the attendants to put a drachm of muriatic acid into a pot of porter, and offer it to the patient as a beverage as often as he was inclined to drink; in a few days, I was informed he was better, and, to my surprise, he ultimately recovered.

Percy Street, London, Nov. 13, 1815.

The *Med. Times and Gazette*, Nov. 30, 1872, makes mention of Rokitansky and his work as follows:—

"While in France or Belgium autopsies are the exception, in Vienna and almost anywhere in Germany they are the rule. In 1870, of 2,689 patients dying in the hospital, 1,485 were submitted to *post-mortem* examination, besides a considerable number examined for medico-legal purposes.

"Rokitansky set out with the principle that the autopsy should never be performed by the person who has treated the patient; who can never entirely free himself from preconceived views. All those who die in the General Hospital, are, therefore, brought to the Institute, of which he is the Director, and he and his assistants examine them without even being aware of the diagnosis that has been made or the treatment that has been pursued. This Institute is situated within the 'great medical city' termed the General Hospital, in one of the courts of which it appears as a handsome building, two stories high. It is known as the Leichenhof, and bears on its façade the inscription '*Indagandis Sedibus et Causis Morborum.*' Its ground-floor opens into a large court, surrounded by a railing, where the families of the deceased assemble to recognize them and accompany them to the cemetery. The corpse, which has been examined the day before, has been reclothed and deposited in an open coffin, surrounded by flowers, and the religious ceremonies are performed in a chapel attached to the Leichenhof. These attentions much contribute to attenuate the prejudices felt by so many against autopsies. The dead are brought from the wards and lie each on a bed, stripped of clothing, awaiting the autopsy, and having attached to a toe a small leaden plate inscribed with the number which has been entered on the register, so that all doubt as to identity is prevented. . . . There are two rooms wherein the autopsies are performed—one for the medico-legal autopsies, to which students are not admitted; and the other for the clinical autopsies, wherein is a large amphitheatre for their accommodation. The rest of the floor is occupied by rooms for the assistants for the pathological lectures, as also work-rooms for the clinical professors containing preparations, tests, microscopes, &c. On the second floor is situated the splendid museum, for which Prof. Rokitansky's 65,000 autopsies have supplied ample materials; there is here, also, a lecture-room for the course of pathological anatomy, and the laboratory of Prof. Stricker.

"Every morning, the autopsies are practised with rapidity, and yet with care, by the professor and his assistants; and not unfrequently the clinical professors with their pupils are present at the examination of the bodies of their patients. They are here, however, simply as spectators. Of course, the diagnosis is almost always confirmed by the autopsy; and where this is not the case, the professor, returning to his clinical wards, explains to his pupils the cause of the error that has taken place."

Correspondence.

DIABETES MELLITUS.

MESSRS. EDITORS,—Diabetes mellitus is not by any means a common disease; and it is fortunate for the community that such is the case, for the disease is notoriously intractable—death being the rule and recovery the exception.

The rarity of the complaint must be my excuse for publishing the notes of a case still under treatment; my chief object being to draw the attention of the profession to a cause of diabetes which, so far as I am aware, has been overlooked, namely, *uterine disease.*

Mrs. S. consulted me for the first time in February, 1872. Age 32; had been married eight years; husband living; has one child, five years of age; never had a miscarriage. Since the birth of her child, menstruation has always been painful; she complains of pain in the occiput and the vertex; severe backache; has almost constant leucorrhœa, the discharge occasionally tinged with blood; appetite good, but troubled constantly with thirst; insomnia; passes a great deal of clear urine, during night as well as day; saliva very acid. Next day, I examined a specimen of *urina sanguinis*, and found it slightly acid, clear; no deposit on standing twelve hours; sp. gr. 1054. The abundant presence of sugar was shown by Trommer's, Moore's and the fermentation tests; also by evaporating an unmeasured quantity on a water bath, which left a large quantity of amorphous grape sugar.

The patient was put upon an animal diet, including milk, with marked benefit. The quantity of urine decreased to about four pints in the twenty-four hours; the thirst abated; and she did not require to get up at night to pass water so frequently as before. March 5th, a specimen of the morning urine was examined. It appeared clear, with a slight deposit of urates on standing. Sp. gr. 1040. Six ounces, avoirdupois, were evaporated over a water-bath, and 198 grains, troy, of sugar remained.

Mrs. S. agreed to an examination of the womb, which revealed granular inflammation of the os and cervix uteri, with endometritis. The large sound passed three and one fourth inches easily. It was then covered with a pledget of fine cotton batting, passed to the fundus, and was withdrawn covered with pus and blood. The uterine cavity was repeatedly and carefully cleansed with moist cotton, strong carbolic acid (equal parts crystals and glycerine) applied, and the vagina syringed with a weak solution of permanganate of potassa. A similar treatment was continued weekly till May; iodine was occasionally substituted for the carbolic acid, and, on one occasion, a saturated solution of chromic acid. Vaginal douches, consisting of a gallon or more of hot water (90° to 95°), were administered at first every night, and latterly three times a week.

The urine was examined weekly. On May 8th, the urine had decreased in quantity to two pints in twenty-four hours; color natural; acid to litmus paper; sp. gr. 1020. No sugar could be detected, either by Moore's or Trommer's test. Her unnatural thirst has gone. She did not require to get up at night to pass water. All the uterine symptoms had disappeared; and a speculum examination demonstrated a healthy state of the parts. During the uterine treatment, the diet rules had been considerably relaxed.

Mrs. S. went to the country in June, resuming her ordinary diet, and I did not see her again till October. An examination of the urine, October 2d, showed that the sugar had returned, accompanied by thirst, though not as bad as before. Sp. gr. 1038; one ounce contained fifty-two grains of sugar.

The patient's diet was again partially restricted. Lactic acid was prescribed for internal use, with buttermilk. In December, the amount of sugar had materialy decreased, all the symptoms showing a corresponding improvement.

The question arises, To what extent does the diabetes, in this case, depend upon uterine disease? It is true that dietary treatment has been, to some extent, associated with the local remedies; but, while the most stringent dietary rules, alone, failed to cure, local uterine applications, combined with moderate restrictions as to food, entirely arrested the disease for a time. It is also true that the diabetes returned again, the uterine trouble also coming back, although in neither case to the same extent. If, as many physiologists believe, diabetes is caused by some continued disturbance of the nervous system—ganglionic or cerebro-spinal—what more likely to do so, in a woman, than irritation of the nerves belonging to the womb?

This case is respectfully submitted to the consideration of my fellow-practitioners, in the hope that more light may be thrown on a confessedly obscure subject.

Stoneham, Mass. W. SYMINGTON BROWN, M.D.

A CASE OF LACERATION OF THE RECTUM NEAR THE INTERNAL SPHINCTER.

MESSRS. EDITORS,—A French boy, about five years old, who had diarrhœa, got up in the night when his parents were asleep, and having a prolapsus of the rectum, and thinking it was something that ought to be got rid of, took a splinter of wood to remove it with, and produced a laceration of the gut through all its coats, something more than two fingers in breadth, and so near the sphincter that the lower fragment had returned to its natural position spontaneously. The laceration was transverse. There had been considerable bleeding from the hæmorrhoidal vessels, and the gut was projecting like a hernia through the artificial opening.

I could think of no authority that I could be guided by in treating the case, and there was no one near whom I could consult. I thought it would be extremely difficult to approximate the lacerated edges by suture; so, after cleansing the parts and removing the splinters, which were sticking in the wound, I returned the bowel, and gave my patient opium every two hours, to keep the bowels quiet, so as to have no discharges from them, or even any accumulation in the rectum; hoping to get either a union of the parts, or an inflammatory adhesion to surrounding parts, and avoid perineal abscess. I avoided such articles of diet as contain any residuum, and kept him on mucilage of slippery elm and gum Arabic, raw eggs and gruel. I treated the case in that way for two weeks. There was no discharge from the bowels during that time, though he had had diarrhœa previously, nor was there any fæcal accumulation to be felt in the rectum at the end of that time. I then, after suspending the opium a few hours, ordered a dose of castor oil, which operated without any difficulty. After that, he ate as usual. He has had no trouble since. The case occurred a year ago last fall.

Beebe Plain, P. Q., Dec. 31, 1872. N. CHENEY.

Medical Miscellany.

APPOINTMENT.—Dr. W. P. Bolles has been elected Pathologist at the City Hospital, in place of Dr. S. G. Webber, resigned.

THE traffic in American medical diplomas, we regret to say, still continues; one unfortunate victim has confided his experience to the *British Medical Journal*, having parted with £42 for useless parchment. Is it really impossible to prevent such swindling operations?

AN arrangement has been at length definitely made, by which the lady medical students may now attend the wards of the Edinburgh Royal Infirmary on Sunday with Dr. Heron Watson.—*Brit. Med. Journal.*

MASSACHUSETTS GENERAL HOSPITAL.—The number of patients admitted to this institution during the year 1872 was 1547—1019 males, 528 females. The whole number treated was 1701, of which 1289 were free; 259 were accidents. 1271 were discharged well or relieved, 160 not relieved or not treated, and 120 died, a percentage of 7·74. The average number in the house was 135—25 paying, 110 free.

641 were residents of Boston, and 802 of other parts of Massachusetts. 665 were Americans, and 882 foreigners.

268 were refused admission. 11,878 were treated as out-patients; 3057 of these were dental cases, and 1006 had *teeth filled.*

Officers of the Institution, 1873.—Edward Wigglesworth, President, Nathaniel Thayer, Vice President. J. Thomas Stevenson, Treasurer. Thomas B. Hall, Secretary.

Trustees.—Henry B. Rogers, James M. Beebe, E. Francis Bowditch, Charles R. Codman, Charles H. Dalton, Edmund Dwight, George E. Ellis,* Samuel Eliot, George S. Hale, Samuel G. Howe,* Henry P. Kidder,* Samuel D. Warren.*

Board of Consultation.—John Jeffries, M.D., Edward Reynolds, M.D., John B. S. Jackson, M.D., Winslow Lewis, M.D., H. I. Bowditch, M.D., D. H. Storer, M.D., Charles E. Ware, M.D., C. E. Brown-Séquard, M.D., John E. Tyler, M.D.

Officers of the Hospital.—Norton Folsom, M.D., Resident Physician. George C. Shattuck, M.D., Francis Minot, M.D., Calvin Ellis, M.D., Samuel L. Abbot, M.D., H. K. Oliver, Jr., M.D., Benj. S. Shaw, M.D., Visiting Physicians. Henry J. Bigelow, M.D., Henry G. Clark, M.D., Samuel Cabot, M.D., George H. Gay, M.D., Richard M. Hodges, M.D., Algernon Coolidge, M.D., Visiting Surgeons. David H. Hayden, M.D., Wm. L. Richardson, M.D., G. G. Tarbell, M.D., E. N. Whittier, M.D., Physicians to Out-patients. Chas. B. Porter, M.D., J. Collins Warren, M.D., Henry H. A. Beach, M.D., Surgeons to Out-patients. James C. White, M.D., Physician to Out-patients with Diseases of the Skin. James J. Putnam, M.D., Physician to Out-patients with Diseases of the Nervous System. Frederick I. Knight, M.D., Physician to Out-patients with Diseases of the Throat. Reginald H. Fitz, M.D., Microscopist and Curator of the Pathological Cabinet. Henry P. Quincy, M.D., Artist. Charles Wilson, D.M.D., Dentist. Thos. M. Rotch, Wm. E. Moseley, Medical House-pupils. Edw. W. Emerson, Edw. R. Buckingham, J. Foster Bush, Wm. E. Stedman, Surgical House-pupils. Miss C. L. Sturtevant, Matron. Chas. A. Clough, Apothecary.

Officers of the McLean Asylum.—George F. Jelly, M.D., Superintendent. Chas. F. Folsom, M.D., Ferdinand A. Stillings, M.D., Assistant Physicians and Apothecaries. Walter J. Norfolk, Medical Student and Apothecary. George W. Whittle Steward. Mrs. Abby M. Whittle, Matron. Elbridge S. Upham, Miss Lucia E. Woodward, Supervisors.

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* Appointed by the Governor of the Commonwealth.

Stevens Triennial Prize.—The Stevens Triennial Prize for 1873 has been awarded to an Essay on *The Sphygmograph; its Physiological and Pathological Indications*; by Edgar Holden, M.D., of Newark, New Jersey.

The questions proposed for the next prize (1876) are as follows:—

I. *The History of Epidemic Diseases in the United States from* 1860 *to* 1870; statements as to localities, dates, extent of prevalence and mortality, to be authenticated by appropriate references. The question of *treatment* is not to form a part of the above subject.

II. *The Use of the Spectroscope in its Application to Scientific and Practical Medicine.*

The competing essays on either of the above subjects must be sent in to the President of the College of Physicians and Surgeons, New York, on or before the first day of January, 1876. Each essay must be designated by a device or motto, and must be accompanied by a sealed envelope, bearing the same device or motto, and containing the name and address of the author. The envelope belonging to the successful essay will be opened, and the name of the author announced at the Annual Commencement of the College, in March, 1876.

This prize, which will amount to two hundred dollars, is open for universal competition.

By order of the Prize Committee, John C. Dalton, M.D.

The Hastings Gold Medal, value twenty guineas, is offered annually by the British Medical Association as a prize for an essay on some subject connected with medical science. The subject selected for competition for 1873 is "On the Pathology and Treatment of Ovarian Diseases;" and the award will be made at the annual meeting of the Association in that year. Essays must not be in the handwriting of the author. Each essay, which must not exceed in length twenty-four pages of the *British Medical Journal*, must be sent, under cover, with a sealed envelope bearing the motto of the essay and the name and address of the author, to the General Secretary of the Association, 37 Great Queen Street, on or before the 1st of May, 1873. The successful essay will be the property of the Association, and will be published in the *British Medical Journal.*

NOTES AND QUERIES.

Is there any thing, or procedure, that will prevent scars after smallpox—or can such scars be diminished by art? *Truth*, not belief or assumption, wanted. Inquirer.

Mortality in Massachusetts.—*Deaths in seventeen Cities and Towns for the week ending March* 8, 1873.

Boston, 146—Charlestown, 16—Worcester, 21—Lowell, 18—Milford, 4—Chelsea, 5—Cambridge, 25—Salem, 13—Lawrence, 10—Springfield, 5—Lynn, 14—Fitchburg, 5—Newburyport, 5—Somerville, 6—Fall River, 32—Haverhill, 5—Holyoke, 4. Total, 334.

Prevalent Diseases.—Consumption, 60—pneumonia, 31—scarlet fever, 14—croup and diphtheria, 11.

The deaths from smallpox were as follows:—In Boston five, Charlestown one, and Chelsea one. Of the deaths from scarlet fever, eleven were in Boston.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, March 15th, 174. Males, 92; females, 82. Accident, 3—abscess, 1—apoplexy, 1—inflammation of the bowels, 2—disease of the bladder, 1—bronchitis, 8—inflammation of the brain, 1—congestion of the brain, 1—disease of the brain, 9—cancer, 3—cerebro-spinal meningitis, 10—cyanosis, 1—consumption, 22—convulsions, 6—croup, 5—debility, 6—dropsy, 2—dropsy of the brain, 3—diphtheria, 1—epilepsy, 3—erysipelas, 1—scarlet fever, 9—typhoid fever, 4—disease of heart, 6—hernia, 1—hæmorrhage, 1—jaundice, 2—disease of the kidneys, 1—congestion of the lungs, 5—inflammation of the lungs, 13—marasmus, 7—neuralgia, 1—old age, 5—paralysis, 2—puerperal disease, 3—premature birth, 2—rheumatism, 2—scalded, 1—scrofula, 1—smallpox, 4—stricture of urethra, 1—suicide, 1—syphilis, 2—tumor, 2—teething, 2—whooping cough, 2—unknown, 4.

Under 5 years of age, 68—between 5 and 20 years, 25—between 20 and 40 years, 41—between 40 and 60 years, 24—over 60 years, 16. Born in the United States, 124—Ireland, 35—other places, 15.

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Original Communications.

A CASE OF CEREBRAL CONGESTION, WITH PECULIAR REACTION OF THE SUPRA-ORBITAL NERVE.

By D. F. Lincoln, M.D., Physician to Dispensary for Diseases of the Nervous System.

Read before the Suffolk District Medical Society, Dec. 28, 1872.

The case which I am about to describe is chiefly interesting on account of a singular, and, as far as I know, an unique electric reaction, apparently presented by the supra-orbital nerve while under the influence of the galvanic current, and transmitted in some way to the central organ of vision. But, before describing this reaction, let me repeat at some length the patient's case, which gives a clear and interesting—though not an unusual—history of cerebral congestion.

The patient is 45 years old, has always been a bachelor, and his trade is to press tailors' work with an iron "goose" weighing fifteen pounds. His habits have always been perfectly correct. In intelligence, he is much above the workmen he associates with.

His health has always been good until about the first of January, 1872. He thinks he had been overtasking his mind, especially on Sundays, in the care and instruction of a Sunday-school class of boys, and other matters of a similar sort. At any rate, about the beginning of the year, he began to notice a numbness in his left hand and arm, and afterwards in his leg, which soon passed away, and he felt well again.

In the early part of May, he began, as he expressed it, "to see colors"; that is, shapeless, cloud-like masses of color rolling before his sight. This was especially the case in the dark, but would also occur in the light; and shutting his eyes seemed to make no difference. He was subsequently troubled by nightly visions of all sorts of hideous spectral objects, which prevented sleep. Once he had a fit of palpitation by night, which lasted five minutes. All this again passed away.

Towards the end of May, a new set of phenomena appeared; "his head seemed to rise up, and grow bigger," though he never felt vertigo, nor the sensation of falling; then his sight became very dim, and, at times, when walking the street, it seemed as if the street rose before him; at other times he seemed to feel water trickling over the eyeballs, or saw threads hanging before them. At night, he would no sooner lay his head upon the pillow than he would become wide awake, and uncertain shapes and colors, and what looked like threads, would come before his sight, whether the room was light or dark. His mind was greatly depressed and apprehensive of evil.

For these troubles, he was treated by another physician for seven weeks, ending July 20th; he took, among other things, a large amount of bromide of potassium. The mental depression was really cured during this treatment, and the symptoms referable to the head mostly disappeared; but another set of symptoms, referred to the trunk and extremities, appeared, for the relief of which I was consulted, and which may be described together, although they appeared and disappeared in a capricious manner. Chief among this group was the tingling (which he incorrectly called "numbness") that had signalized the onset of the disorder in January; this affected, at times, both hands and feet. In the early part of July, he felt as if a wet bandage had been tied about both legs, just below the knee; this sensation lasted a week. Lively formication was felt in the legs and arms. He was sometimes observed to twitch his shoulders, arms and eyelids unconsciously. To use his own words, "he experienced such a multiplicity of sensations about the head and shoulders as he could not describe, and, especially, the feeling of painful muscular fatigue, as if he had lifted too much, or had been beaten."

I saw him for the first time, July 27th. At that time his appetite was very good, and the nutritive and excretory functions seemed well performed. The record further states that "his countenance is neither pale nor flushed. His vision is moderately presbyopic; usually very clear; but of late it has been a good deal obscured. Sleeplessness has been a prominent symptom; he is frequently aroused from a commencing slumber, or in the middle of the night, by an active flow of ideas, by the phantasms already mentioned, or by an annoying fit of tingling in his arms and legs. There is no greater mental depression or incapacity than would naturally be expected from one in his circumstances."

It was noted that the following symptoms were *absent*, viz.:—impaired tactile sense in the hands, or numbness of the soles of the feet; muscular weakness or tremor; irregularity of gait, ataxia of arms or legs, severe neuralgic pains, impairment of the functions of the bladder or rectum; facial paresis, nystagmus, double vision, squint, &c.; scotoma, giddiness, vomiting. Hearing was normal. The absence of this class of symptoms, and the normal appearance of the fundus oculi when examined by the ophthalmoscope, justify us in considering the troublesome symptoms I have described as probably of purely functional origin.

I ordered bromide of potassium, fifteen grains three times a day, and dilute phosphoric acid, twelve, and afterwards fifteen minims, three times a day. This he took for seventeen days. At the end of that time—

August 13th.—The numbness of the legs and arms was gone, except for a day or two a slight tingling of the toes and finger-tips. A dry, stinging sensation of the left side of the tongue, after eating, which formerly gave him much trouble, had returned within two or three days past. The dimness of vision was increased; the mental functions had lost something of clearness, and he felt depressed at the consciousness of it. He was ordered to suspend the use of medicines. A galvanic current from six cells was passed during four minutes from the back of the neck to the forehead, and he went home.

Next day, he said that "he had been light and easy in his mental functions since the administration of the current." On the day after, he said he had experienced unusual freedom of the head for three days past; the noises in his left ear had diminished, and the prickling in his hands and feet was entirely gone.

It should be stated that the weather had been excessively hot for many days, and still remained so.

No remedy was used except galvanism, which was applied three or four times in all, at intervals of two or three days. The patient left me on the 21st of August, feeling perfectly able to resume his labor; but the noise, confusion and heat of the confined work-room, with the considerable exertion required in handling his goose, brought back most of his old symptoms, and in two weeks I resumed the galvanic treatment, making a daily application until Sept. 16th (ten days in all). As to the method of application, the negative pole was held in the two hands alternately, and the positive was placed upon the forehead, the current from ten cells being employed. After four minutes of this, the negative pole being still retained in the hand, the positive was placed upon the vertex, or wherever he felt annoying sensations in his head, four minutes longer; making eight minutes in all. Each application was followed by relief from the dull, oppressive sensations in his head; this relief lasted from half an hour to several hours. At the eighth session, he said that his head was quite clear, but that the old tingling in his arms had again become very troublesome; I therefore directed the current from the cervical plexus to the hand for three minutes, both on the right side and on the left, after which the tingling disappeared entirely for three days. Sleeplessness, however, seemed to increase, and occasioned him great uneasiness; bromide of potassium, oxide of zinc, and fluid extract of opium seemed to fail to control it, but hydrate of chloral, in a dose of twenty grains, answered perfectly, and was accordingly continued, to his great comfort, for a week or more.

The subsequent treatment was as follows. First, the galvanism, as first described, was stopped; he said he thought it made him more nervous, and it appeared to me also that no farther benefit was to be derived from that mode of application. A subsequent brief course of galvanization of the sympathetic and spinal column, however, was ventured upon, but seemed to have no perceptible effects. The use of chloral seemed very beneficial, up to a certain point; but he found, on attempting to leave it off, that he was totally unable to sleep. Ergot was given, in doses of thirty and forty drops of the fluid extract, for three days, with decidedly unfavorable results. Finally, all medicine was suspended, and he was directed to apply ice in a bladder to his head at night, and to have the spine rubbed briskly with ice night and morning. Under this treatment, the insomnia very quickly disappeared; and as for the other symptoms, the patient reports, on the 10th of December, two months later, that he can keep steadily at work, provided he has a quiet and wholesome room, that he sleeps well, and has but a slight tingling in the hand perhaps once a fortnight.

In summing up the therapeutics of the case, let me note that bromide of potassium can scarcely be said to have done good; that chloral served an excellent temporary purpose, when the bromide, as well as opium and zinc, entirely failed; and that the application of ice to the head and spine acted in the most decided and beneficial manner. Galvanism instantly relieved the pains and other less describable sensations about the head; it took away the tingling of the arms in a single session; but it seemed entirely incapable of producing sleep, although once or twice a slight temporary drowsiness followed its use.

I will now describe the phenomenon which I designated as peculiar, if not unique. The electrical treatment was commenced—as already described—by passing the current from six or ten cells from the back of the neck to the forehead of the patient, avoiding shock as far as possible. The sight of the left eye being dimmer than that of the right eye, I chose the left side of the forehead, moving the pole about over the skin. All at once, quite unexpectedly to me, he said that everything in the room looked brilliantly clear and distinct; and when I moved the pole away, or took it off, he said that the brilliancy (as he called it) had disappeared. I found that there was a spot, lying about three centimetres to the left of the median line, and the same distance above the superciliary ridge, which, when under the influence of the negative pole, produced this phenomenon; every other part of the forehead appearing quite indifferent. The experiment was repeated successfully on six or eight occasions, but finally, after he had recovered his health, it could not be reproduced. The phenomenon lasted only as long as the pole was in contact with the spot described. The positive pole did not produce the effect. The sympathetic nerve, in the neck, was brought under the influence of the current, but without producing any similar result. Dr. Wadsworth did me the honor to make a most careful ophthalmoscopic examination of the eye, by the direct and the inverted image, while the eye was under the influence of the electric current as described, as well as before and after the experiment; but he was unable to perceive that any change occurred in the retina, or in the refractive functions of the media, nor could he detect anything abnormal in the appearance of the eye.

The origin of this phenomenon is certainly obscure. Yet we have a sort of clew to it in the fact, that the point of reaction lay just over the track of the supra-orbital nerve. Moreover, the symptoms of the patient were such as to point with the greatest probability to a disorder of the circulation in the brain, of a sort often brought on by mental strain and anxiety, to which he had been subjected; the vaso-motor system was in a state of functional derangement. Now, the supra-orbital nerve is a branch of the ophthalmic division of the fifth pair, which possesses connections with the carotid plexus of the sympathetic, as well as with the ophthalmic ganglion; and from the ophthalmic ganglion arise the short ciliary nerves which supply the ciliary muscles, which has considerable to do in regulating accommodation. Could the dimness of vision have been owing to a fault of accommodation, and may the relief have been due to a sensitive impulse, received by the ganglion from the supra-orbital, and reflected back through the ciliary nerves to the ciliary muscle? Against this theory must be urged the fact, that the iris was not affected while the current was passing, although the iris is supplied by the ciliary nerves; besides which, the clinical history makes the hypothesis of spasm of accommodation an improbable one. And if such an accomodative change had occurred, it would surely have been recognized by Dr. Wadsworth in the ophthalmoscopic examination. Again, the ophthalmic ganglion sends a filament to accompany the artery of the optic disk, and if a reflected action proceeded from this ganglion, we should rather expect to see the vessels of the retina affected, which was not the case during the ophthalmoscopic examination.

We may, therefore, consider the evidence as pointing to some other reflected action; and it seems to me that the phenomena may be consistently explained as follows. We know that a galvanic current passed through the terminal distributions of the fifth nerve will produce a perception of light. It is highly probable that this may depend solely upon the electric stimulation of these terminal filaments, and not upon chance currents which may reach the retina in roundabout ways. If this assumption be correct, the nervous stimulus ascends the fifth nerve to its origin in the medulla oblongata, and is thence probably transmitted to the tubercula quadrigemina. A similar order of things may have occurred in our patient. Only, he perceived no flash of light, as care was taken to prevent it, by the avoidance of anything like suddenness or shock in manipulating the electric current. The actual occurrence of improved vision during the passage of a continuous current of electricity deserves, by analogy, to be attributed to a reflex stimulus, originating in the supraorbital nerve, and finally reaching the corpora quadrigemina; or, possibly, reflected still further, and producing a functional stimulus of the retina.

Progress in Medicine.

REPORT ON THERAPEUTICS.

By R. T. Edes, M.D. Harv.

[Concluded from p. 294.]

Digitalis.—Dr. Brunton and Dr. Meyer, each of whom has separately investigated the action of digitalis, publish, in the *Journal of Anatomy and Physiology* for November, 1872, the results of some researches made by them together in the physiological laboratory of Prof. Rosenthal, at Berlin. They conclude, both from the mean height of the blood pressure, the amplitude of the separate pulsations and the form of the curve of descent in the individual pulsation, that the rise of tension, after the administration of digitalis, is due to contraction of the arterioles hindering the flow of blood from the arteries. They criticize the paper of Boehm (see *Boston Medical and Surgical Journal*, Sept. 26, 1872) by saying that the blood pressure in mammals during diastole does not depend, as in frogs, simply upon the action of the heart, since, in the former, the arteries are shut off from the heart by the closure of the aortic valves at the beginning of the diastole, and, consequently, the pressure depends simply upon the elasticity of the larger arteries and the rapidity with which the blood can escape therefrom. They cannot, therefore, consider, as he does, that the rise in pressure is chiefly due to the increased action of the heart. They next attempted to ascertain whether the slowing of the pulse is due to a direct specific influence of the drug on the roots of the vagus, as supposed by one of them, or to the stimulation of these roots by the increased pressure of blood in the cranium, produced by the contraction of the arterioles, as supposed by the other. In order to do this, they diminished the blood pressure by the inhalation of nitrite of amyl, after it had become high, and the pulse slow from the injection of digitalin. If the slowing of the pulse were due to a specific action of the digitalin on the vagus roots, it ought to continue, although the pressure falls, but if due to stimulation of these roots by the high blood pressure, it should disappear whenever the pressure is reduced. Experiments showed that whenever the pressure fell after the inhalation of the nitrite of amyl, the pulse became quick. It might thus appear that the slowing is due, in part, at least, to the high pressure, and not altogether to a direct influence of the digitalis on the vagus.

They were not able to satisfy themselves as to whether digitalis causes contraction of the vessels by acting directly on their walls or on the vaso-motor centre.

Those who have read Dr. Fothergill's prize essay on digitalis will remember a very striking experiment in which vigor is restored by digitalis to the contractions of a heart (frog's) paralyzed and distended with dark blood, under the action of aconite. This is used by the author to illustrate the action of digitalis in some forms of heart disease; but the antagonism here suggested seems to have found practical application in a case reported in the *British Medical Journal* for Dec. 21st, 1872, where a man had taken an ounce of Fleming's tincture of aconite. When the pulse had become irregular, intermittent, and finally imperceptible, and the condition of collapse well developed, twenty minims of tincture of digitalis were injected subcutaneously and galvanism applied to the cardiac region. He rallied in twenty minutes, and swallowed ammonia and brandy and a drachm of tincture of digitalis. His recovery was speedy and complete.

No. 48 of *Volkmann's Sammlung Klinische Vorträge* contains a very excellent resumé, by M. Ackermann, on the action of digitalis, physiologically and therapeutically.

Considerable space is given to the discussion of its action in lowering the temperature and in febrile diseases. The author concludes that, although the cooling action may be supposed due to its increasing the activity of the circulation through the skin, thus subjecting the warmer internal blood more rapidly to the cooling influence of the surface, yet its *modus operandi* is not fully made out, and he would, in consideration of this uncertainty and the dangers which the use of the drug may bring with it, be inclined either entirely to give up its use in febrile diseases, or to limit it to cases in which even the slightest muscular weakness of the heart can be with certainty excluded. In organic diseases of the heart, however, it is indispensable, and the digestive derangements which are so likely to accompany its use in fevers are not only absent, but are replaced by a positive tonic effect.

Hyoscyamia.—Dr. Oulmont, who, with Dr. Laurent, published some researches on the physiological action of hyoscyamia and daturia, in the *Archives de Physiologie* (vol. iii. p. 215–334), now presents in the *Bulletin de Thérapeutique* of Dec. 15th ult. (condensed in the *Practitioner*, Jan. 1873), his conclusions as to the therapeutic value of the former of these alkaloids. He concludes that hyoscyamia represents all the active principles of hyoscyamus.

It should be given, at first, in weak dose (one thirty-second grain, daily), either by pills or by hypodermic injection. We may gradually increase the dose to five or six times this quantity. (A marked case of poisoning is reported from the subcutaneous injection at one time of one-third of a grain.)

The remedy must be continued, even if there are slight symptoms of poisoning, such as dryness of the throat and dilated pupils. But if the symptoms become grave, we must suspend it. These symptoms are temporary and disappear in a few hours.

Hyoscyamia exerts a narcotic action on man. It is efficacious against pain, and particularly against neuralgia; but its power is less than that of opium and of belladonna.

It exerts a favorable action in spasmodic and convulsive neuroses. It cures mercurial trembling in cases where every other remedy had failed. It has produced a notable improvement in senile tremor and paralysis agitans. Its action in locomotor ataxy is null. In traumatic tetanus, although the patient died, this remedy produced a sufficiently notable remission of the symptoms to leave the question of its power still open, and to call for new experimentation.

African Arrow-Poison.—Dr. Thomas R. Fraser *(Jour. Anat. and Phys.*, Nov., 1872) has examined the action of a new arrow-poison which appears to be widely distributed in Africa. The plant is a woody climber, of the order apocynaceæ, and has been named *Strophanthus Kombé.* From the seeds, Dr. Fraser obtained an extract and an active principle for which he proposes the name *strophanthine.* He believes that his preliminary investigation enables him to make the following statements : Strophanthus acts primarily upon the heart, and produces, as the final result of the action, paralysis of that organ, with permanence of the ventricular systole.

Pulmonary respiration continues in cold-blooded animals for several minutes after the heart is paralyzed. The striped muscles of the body are acted upon, twitches occur in them, their tonicity is exaggerated, and, finally, their functional activity is destroyed, the muscles being then hard, and, soon afterwards, acid in reaction. These changes are accomplished subsequently to the final effect on the heart. They are the result of a direct contact of the substance within the muscles themselves, and are independent of the action on the heart, as well as of any changes that occur in the physiological condition of the cerebro-spinal nervous system.

The reflex function of the spinal cord is suspended soon after the heart is paralyzed; but the motor conductivity of the spinal cord and of the nerve trunks continues after the striped muscles of the body are paralyzed. The lymph hearts of the frog continue to contract for many minutes after the blood heart has been paralyzed.

Messrs. Carville and Polaillon *(Lancet,* Dec. 14th) have made researches on the pahonim poison of Gaboon, probably the same with that just described, and arrived at similar results.

Conia.—Dr. I. Wilkie Burnam *(Practitioner,* Dec. 1872) details seven cases of acute mania treated by the subcutaneous injection of conia and morphia, and with favorable results so far as quieting maniacal excitement is concerned. As conia has not often been used hypodermically, it may be useful to state the method of preparation. Coniæ, flʒiij. ♏ xii.; acid. acet. fort., flʒiij. ♏ xl., or a sufficiency to cause neutrality; sp. vini rect. flʒi.; aq. dest. ad fl℥ij. ; ♏ v. of solution = ♏j. of conia. The acid must be added cautiously, the mixture being tested from time to time with litmus paper to determine its reaction.

To this may be added an equal part of a solution of acetate of morphia (one-fourth grain in five minims). The result is a clear solution, of which five minims are equivalent to one-half minim of conia and one-eighth grain of acetate of morphia. Care should be exercised, especially in the use of new specimens of the alkaloid.

Camphor.—Dr. John Harley (*Practitioner,* Oct. 1872; *Jour. Anat. and Phys.*, Nov., 1872) describes some observations which appear to show that camphor acts with but little energy on man. So large a dose as thirty-five grains merely caused giddiness, followed, in thirty-five minutes, by a full, bounding, but not accelerated, pulse, by flushing of the cheeks, and by a little somnolency; all of which symptoms had nearly disappeared within two hours after the dose was administered. These results differ from those obtained by other experimenters, and it is probable that some difference in the conditions necessary to absorption may have been the cause of the discrepancy.

Bibliographical Notices.

Fistula, Hæmorrhoids, Painful Ulcer, Prolapsus and other Diseases of the Rectum—their Diagnosis and Treatment. By WILLIAM ALLINGHAM. Second Edition, revised and enlarged. Philadelphia: Lindsay & Blakiston.

THIS book, admirable for simplicity, thoroughness and clearness, belongs to the same class as Peaslee's recent work on the Ovaries. Mr. Allingham proves that an immense deal of comfort can be given by intelligently treating disorders and lesions which are often slurred over, to the discredit of the profession and the discomfort of the public. "When diseases of the rectum are neglected, or when the surgeon prescribes confection of senna and gall ointment in every case, cures do not result. . . . ." The opportunity (4000 consecutive cases) for observation which Mr. Allingham has had at St. Mark's Hospital for Fistula, in London, has been well improved. He divides fistula into three kinds—complete, blind external and blind internal. The details of the treatment of fistula need not be repeated in this JOURNAL; the excellent clinical lecture of Dr. Fifield, recently published, nearly exhausts the subject. Some cases are given to show that fistula may disappear spontaneously. In private practice, a few cases were cured by injections, but hospital patients cannot, as a rule, afford to give up several months to a course of treatment which may not be of the least benefit. Rest must be insisted on after the injection is made, and the sinus is more likely to heal when the external opening is at a distance from the sphincter. The importance of laying open *all* tributary sinuses is insisted on when cutting is done, and undermined overlapping edges of skin must be taken off. The mode of getting a piece of twine through a fistulous tract seems rather clumsy, and cutting through the fistula by gradually tightening the twine is not recommended as a favorite mode of treating fistula. Mr. Allingham finds that many fistulous patients have phthisis, and recommends operative interference in well-selected cases. He supports his opinion by cases cited at length. Throughout the work, particular modes of treatment and theories of disease are abundantly supported by detailed cases.

The subject of hæmorrhoids is treated fully; they are divided into external and internal, and the latter into capillary, arterial and venous. Mr. Allingham prefers the ligature, *properly applied*, to any other mode of treatment of internal piles. It may not be out of place to describe his mode of proceeding. Having dragged down the hæmorrhoid with a vulsellum, with a cut of the scissors separate the pile from its muscular and submucous connections, then tie at the bottom of the deep groove you have made. In 3210 cases of ligature, there has not been one followed by pyæmia. It seems as if Mr. Allingham must have some personal reason for opposing the clamp and cautery operation so strongly; he cites cases of pyæmia following cauterization, and condemns the operation in all cases quite bitterly. The writer does not know how generally Smith's clamp and the cautery have been used in Boston; we have, however, had several cases of pyæmia and death after the ligature of piles, and none after cauterization that have been reported. Mr. Allingham is quite right in considering the pain after cauterization much more severe than after ligature, but the results of the former mode of treatment are very satisfactory. Hæmorrhage after operations on piles is the subject of a long and carefully written chapter, and his method of effectually arresting alarming hæmorrhage is worth describing. Pass a strong silk ligature through the apex of a bell-shaped sponge and bring it back again, so that the apex is held in a loop of thread. Wet the sponge, squeeze it dry and powder it well with persulphate of iron. Pass your forefinger into the bowel, and upon that as a guide push up the sponge, apex first, by means of a bougie or anything that is convenient. Carry the sponge up five inches, leaving the double thread hanging outside. Fill up the rectum below the sponge with cotton-wool powdered with iron or alum. When you have completely stuffed the bowel, take hold of the silk ligature attached to the sponge, and while with one hand you pull *down* the sponge, with the other hand push *up* the wool. This plug should remain in at least a week. A male catheter passed through the centre or by the side of the sponge before stuffing, will allow gas to pass out, if it is thought that this is necessary.

Fissure of the rectum is treated at length, and very thoroughly. The description of the structure and microscopic character of polypus of the rectum is very unsatisfactory, but the treatment is excellent. The chapter on ulceration of the rectum occupies about twenty-five pages, and is very thorough and clear. Many patients were cured quickly by complete rest in the recumbent position with milk diet. Non-cancerous stricture of the rectum and procidentia recti have each a chapter, and the treatment of both these diseases is marked by great good sense, good judgment and practical skill. In regard to the former, Mr. Allingham remarks :—" However you treat strictures of the rectum, you must be prepared for much disappointment ; they are far more formidable than strictures of the urethra, take a longer time to cure, and are greatly more prone to relapse." The directions for performing lumbar colotomy in advanced cancer of the rectum are very clear. Mr. A. has performed the operation sixteen times, and has never regretted having done it. Rodent ulcer has a short chapter given to it, perhaps the least satisfactory in the book ; the author's knowledge of pathological histology is not extensive, but his practical treatment is excellent. He does not hint at the probability of rodent ulcer being a form of epithelial cancer, a fact established by Dr. J. Collins Warren,in the very excellent monograph to which the Boylston Prize was awarded in 1872. There is no other book on regional surgery more plain and practical than this, and for any one without great experience to treat diseases of the rectum without having studied it would be very unwise. J. H.

The Journal of Anatomy and Physiology. Conducted by G. M. HUMPHREY, M.D., F.R.S., and WM. TURNER, M.B. Second Series. No. xi. Nov., 1872. London : Macmillan & Co.

THIS, the first half of the seventh volume of an excellent journal, contains the usual variety of good articles on physiology and on human and comparative anatomy. The list of contributors to the preceding six volumes contains the name of almost every eminent

English anatomist, and their communications have shown how much good work is doing in England.

The celebrity which the German schools have obtained for patient and philosophical research has had one bad effect upon their younger followers, namely that of seeking to win honors by a hyper-accuracy in unimportant details which tends to confuse the subject and savors of pedantry. We do not find this fault with the English observers, whose descriptions are, as a rule, clear, short and readable. The papers on anatomy are, perhaps, as a rule, of more value than those on physiology, though the reports on the progress of the various departments of the latter science are very comprehensive. The reports on the progress of anatomy have been written, from the beginning, by Prof. Turner, while those on physiology have, at different times, been the work of Prof. Rutherford and of Drs. Gamgee, Fraser, Brunton and Ferrier.

English Midwives; their History and Prospects. By J. H. Aveling, M.D. London: J. & A. Churchill. 1872. 12mo. pp. 182.

We finished the reading of this book with feelings of disappointment and sadness—disappointment, that women when unopposed had so signally failed in a department of medical art for which they are generally supposed to be peculiarly fitted, if for any; sadness, that their possession of the practice resulted in so much human suffering and loss. And this work was written by a friend to their cause, for he says in his preface :—

"To arouse an interest in the midwives of this country—to show what misery may result from their ignorance—and to gain sympathy, advice and assistance, in endeavoring to raise them to a more refined and intellectual position, has induced him to present this little volume to English readers."

That we may not seem to speak from personal prejudgment, we will quote from the *London Medical Times and Gazette,* adding, perhaps, a few italics. "He traces," says the reviewer, "the midwife (i.e. with-woman) from the sixteenth century . . . . . up to the present date ; and we are bound to confess that, with some few noble exceptions, the majority of these ladies seem to have been ignorant, overbearing busy-bodies, more adept at slandering the men midwives, and boasting of their own pretensions, than at mitigating human suffering and saving human life."

"With the field all their own to start with, and with tongues scurrilous enough to protect their monopoly, they have yet been beaten out of the field century after century, and compelled, by the verdict of the public, to acknowledge *their inability to practise successfully the higher branches of the art.*"

"The author instances the present ignorant condition of midwives as an argument for a better system of education for them ; but, after a careful perusal of his work, we feel disposed to think that, if nearly four centuries have accomplished so little for them, *they had better yield* with a good grace, *and accept the humbler*, but not less needed, *duty of nurse, and leave the science and art of midwifery to those whose education and sterner intellect fit them especially for the practice of such anxious and responsible duties.*"

"We cannot do better than to quote the author's own words (p. 168). 'And thus closes the history of our English midwives, and of their ignorance and incompetence. A sad story of indifference and neglect, of petty jealousies and sordid interests, of murdered innocents, lost mothers and bereaved families.'"

"Thus far, it is evident we must either pursue a totally different method of instructing our midwives, as also of licensing, registration and supervision, or, what seems at present more advisable, educate them as nurses only, and thus put a *check to the frequent manifestations of ignorance and mismanagement* with which we are unfortunately only too familiar."

To these quotations of the reviewer, we feel constrained to add another from the author, who, after describing the furious opposition made to the practice of midwifery by men, thus sums up the whole story:—

"Accoucheurs are only now preferred to the midwives because they have been proven to possess greater skill, greater judgment, greater mildness, greater patience, and greater decorum." (p. 157.)

Five weighty reasons, surely; and this from a friend and true! What of other departments of medicine and surgery? V. S.

A Manual of Histology. Stricker. American Edition, edited by Albert H. Buck. Pp. 1106. New York: William Wood & Co. 1872.

The merit of *Stricker's Handbuch* is too well recognized to be dwelt upon. It will be long, we fear, before any collection of histological monographs worthy to be compared with it will make its first appearance in English. In the meantime, we must be satisfied with having men sufficiently well educated to translate it properly.

The first 406 pages are a reprint from Mr. Powers's translation for the New Sydenham Society, the remainder is the work of New York and Boston physicians. All have done their work so well that we would make no comparisons, but in consideration of the great difficulties which Meynert's paper on the brain presents, and of the importance of having, so far as the subject allows, a correct translation of it, we think we may congratulate Dr. J. J. Putnam on his success.

The book is valuable, not only to those who cannot read the original, but to those who, having pursued their histological studies in Germany, are often at a loss for a concise English equivalent to some rather technical German word. Our severest criticism is that the work is bound in one volume; it should have been in two.

The Ocean World. From the French of Louis Figuier. New Edition, revised by E. Percival Wright, M.D. With 435 Illustrations. New York: Harper & Brothers. Pp. 656.

Dr. Wright is certainly to be congratulated on the success of his attempt to revise this work. It would, no doubt, as he says, have been easier and pleasanter for him to re-write it. He has preserved the wood-cuts and the attractive style which are about all in the original that was worth preserving, and has made it a pretty correct book, which will be interesting and instructive to those who wish for bright glimpses of science, but have neither time nor inclination for its serious study.

✓ *Notes on Asthma: its Nature, Forms and Treatment.* By John C. Thorowgood, M.D. Lond. Second Edition. Philadelphia: Lindsay and Blakiston. 1873.

This is a little work of 166 pages, and its scope may be inferred by the following partial transcript of its preface:—

"The reader of this book must bear in mind that it does not profess to be a systematic treatise on asthma. With such a work our profession has been already well supplied from the pen of the late Dr. Hyde Salter. . . . ."

"The present work is based upon such notes of asthma, its forms and complications, as the author has been able to make during his ten years' service as Assistant-Physician to the Victoria-Park Hospital for Diseases of the Chest."

Notwithstanding the modest announcement of the author, and the unpretentious character of the book, Dr. Thorowgood has written a really admirable treatise on the nature, forms and treatment of asthma, suited alike to the student and practitioner, and we heartily commend it to their notice.

BOOKS AND PAMPHLETS RECEIVED.

Diseases of the Urinary Organs, including Stricture of the Urethra, Affections of the Prostate and Stone in the Bladder. By John W. T. Gouley, M.D. With one hundred and three Wood Engravings. New York: William Wood & Co. 1873. Pp. 368. (For sale by A. Williams & Co.)

A Handbook of Post-mortem Examinations and of Morbid Anatomy. By Francis Delafield, M.D., Curator of Bellevue Hospital, &c. New York: William Wood & Co. 1873. Pp. 376. (For sale by A. Williams & Co.)

Wöhler's Outlines of Organic Chemistry. By Rudolph Fittig, Ph.D., Nat.Sc.D. Translated from the Eighth German Edition, with additions, by Ira Remsen, M.D., Ph.D. Philadelphia: Henry C. Lea. 1873. Pp. 530. (For sale by A. Williams & Co.)

The Science and Art of Surgery. By John Eric Erichsen. A new Edition, enlarged and carefully revised by the Author. 2 vols. Philadelphia: Henry C. Lea. 1873. (For sale by A. Williams & Co.

Manual of Chemical Analysis as applied to the Examination of Medicinal Chemicals. A Guide for the Determination of their Identity and Quality, &c. By Frederick Hoffman, Ph.D., Pharmaceutist in New York. New York: D. Appleton & Co. 1873. Pp. 393. (For sale by A. Williams & Co.)

Lessons in Elementary Anatomy. By St. George Mivart, F.R.S., &c., Lecturer on Comparative Anatomy at St. Mary's Hospital. London: Macmillan & Co. 1873. (For sale by A. Williams & Co.)

American Chemist. A Monthly Journal of Theoretical, Analytical and Technical Chemistry. Philadelphia. 1873. Vol. III. No. 8.

The Criminal Use of Proprietary or Advertised Nostrums. By Ely Van de Warker, M.D. Syracuse, N. Y. Pp. 15.

Reports of Medical Societies.

MIDDLESEX EAST DISTRICT MEDICAL SOCIETY. AZEL AMES, JR., M.D., SECRETARY.

JAN. 15, 1873.—The Society met with Dr. Clough, at Woburn. The President, Dr. Harlow, in the chair.

Dr. Ames read a paper on anomalous cases of "Herpes Zoster."

The Committee on Resolutions, appointed by the President to prepare resolves upon the death of Dr. Edward Gage, a member of the Society, reported the series already published in the JOURNAL. Remarks, warmly eulogistic of the deceased, were made by Drs. Clough, Holmes, Harlow and Cutter.

Dr. Cutter read the following paper :—

A Case illustrating the Use of the Laryngoscope.—On the 12th of January, 1873, at about two in the morning, the wife of Mr. F. L. Marsh was awakened by strange movements on the part of her husband. He was speechless and cold, and acted as in a fit of epilepsy. Mr. Marsh is a farmer, 42 years of age, enjoying perfect health, except a cold. A messenger was immediately despatched for the writer, stating the above in substance. Owing to my indisposition, Dr. Drew very kindly went in my place. He found the man had recovered himself—that he could talk, swallow without difficulty and breathe readily. He administered a quieting potion. Mr. Marsh noticed the disappearance of his false teeth. They were the upper middle and left lateral incisors—two in number. They were attached to a hard rubber plate, which fitted the concavity of the hard palate, and had pointed processes projecting between the interstices of the teeth. Dr. Drew examined the throat, but nothing was to be seen or felt. No one but the patient supposed that the plate and teeth could be in his throat. About nine in the morning, the writer saw him, summoned by an urgent message that the patient was choking up. The man was in bed, mouth open, drooling. Voice good. Respiration good. Swallowing good, but increasingly painful. After some slowness and hesitation, the patient dressed himself and was seated in a chair before a window, through which a clear, morning sun streamed. Direct inspection and palpation revealed nothing. The instant the laryngoscope was introduced, the two white teeth appeared unmistakably at the base of the tongue, between it and the epiglottis. I then took a long pair of œsophagus forceps and easily got hold, but owing to the slippery nature of the plate, covered with saliva—and the firm manner in which it was held, both by the atmospheric suction and the lateral processes of the plate being imbedded into the lateral pharyngeal walls—the forceps slipped off without making any impression whatever. A second essay failed. I then bethought me of my modification of the ecraseur, devised for the removal of posterior pharyngeal polypi, which I fortunately brought with me, and which has been exhibited to the Society. A loop of projecting wire, about five-eighths of an inch in diameter, was bent round at a right angle. With this loop I fished till I caught a projecting portion, and then, I pulled so hard that the loop was straightened out, and the patient declared that he could not stand the pulling. I then removed the ecraseur, and the plate was almost immediately ejected upon the carpet—the whole time for diagnosis and removal being not over three minutes. The plate proved to be two inches long, one inch and five-eighths wide at broadest part, and three-fourths of an inch height of arch. It formed an irregular triangle. The two teeth were at the apex. The processes on each side fastened it to the pharynx, and at each effort at deglutition only buried the deeper. The concavity of the plate fitted the convexity of the tongue, and the whole thing, wonderful as it seems, was buried between the epiglottis and the tongue. The ease of detection is due wholly to the laryngoscope; the facility of removal, to a sudden thought, vouchsafed when needed. Had worst come to worst, I was prepared to etherize, perform tracheotomy, and then, breaking up the plate, to have removed it piecemeal.

Sept. 19.—The Society met with Dr. Hodgdon, at Arlington. The President, Dr. Harlow, in the chair.

Dr. Cutter alluded to his recent success in securing a fine specimen of nephritic calculus of the uric acid variety. The patient had the usual symptoms, but received no relief, except from hot baths, which greatly alleviated the distress. The last attack was very severe, but yielded to the bath, and the next day the patient passed this calculus. There was no pain or soreness during the intervals between attacks, the pain being in the lumbar region, penis and testes.

Dr. Harlow presented fragmentary specimens of phosphatic calculi from a lady patient, from whom previous removal had been effected. Lime-impregnated water had been freely used by the patient for some years. The uterine sound and a common pair of forceps were the instruments used in the removal.

Dr. Hodgdon read, by appointment, a highly able and interesting paper on "The History and Uses of Pessaries," for which the thanks of the Society were returned.

Several varieties of pessaries were exhibited, a number among them being the inventions of members of the Society, Drs. Jordan and Cutter, and a discussion of their respective merits took place.

Dr. Chapin reported the sequel of the pregnancy in the case of incipient convulsions, simulating puerperal, previously reported. Delivery was effected at full term, without untoward symptoms, and the patient made a good recovery.

Nov. 13, 1872.—The Society met with the President, Dr. Harlow, at Woburn. The President in the chair.

Dr. Holmes read a paper giving an account of two cases of "Infantile Uterine Hæmorrhage," a verbal statement of one of them having been given before.

Dr. Winsor requested information in regard to cases of early manifestation of sexual desire, relating a case of a boy, only 2 years of age, who exhibited a decided tendency in that direction.

Dr. Winsor also mentioned a case of labor in which he determined the presentation by external manipulation. In this case, the transverse uterine diameter was the greater, indicating twins or a transverse presentation. It proved the latter, requiring version.

Dr. Cutter read a paper on the "Pyriform Fossæ," newly described localities at the bottom of the pharynx :—

The introduction of the laryngoscope has opened up a new field of physical, physiological and pathological exploration, and, also, of course, has brought an addition to our nomenclature. This word is one of them. It is applied to a locality at the bottom of the pharynx —one on the right side and one on the left. It lies to the posterior part and is of the shape of the body of a pear, hence the name. To understand its situation, it is well to remember that the larynx is nested in the pharynx like a small cup in a large one. It lies to the front. Above it rises the epiglottis, next the base of the tongue. A frænum in the median line connects the back part of the tongue with the front of the epiglottis. Two other fræna connect each wing of the epiglottis, to the right and to the left, with the side of the pharynx. This arrangement of fræna divides the space in front of the epiglottis into two fossæ called collectively the valleculæ. Back of the larynx is the mouth of the œsophagus. Except during deglutition, the œsophagus is puckered up and closed so as to be almost invisible. The posterior wall of the larynx, which is united with the anterior wall of the œsophagus, touches closely the post-pharyngeal wall, thus concealing the œsophageal opening. To the right and left of the inter-arytenoid band are spaces which form the openings of the pyriform fossæ ; so that the fossa on the right is bounded in front by the right wing and frænum of the epiglottis, behind by the pharyngeal wall, outside by the same wall which curves around in front, and inside by the larynx and arytenoid cartilages. The fossa on the left is similarly bounded. The depth varies from about half an inch to one inch ; the width varies. Sometimes it gapes open wide, showing a smooth, roundish bottom, of a whitish aspect. Sometimes it is so closed as to be difficult of inspection. The tissues composing the sides and bottom of the fossæ are loose and spongy, resembling that over the eyelids.

The lower outer back corners of the bottom of the pharynx are the most simple designations of the localities of the pyriform fossæ. In the act of deglutition, the larynx is drawn upwards and outwards by the muscles of the pillars of the soft palate mainly. The epiglottis is closed close down over the larynx, and the pyriform fossæ are obliterated, as it were.

Physiology.—These fossæ afford crypts or receptacles in which the secretions of the throat collect from above or below, preventing their running into the larynx, and irritating it, causing cough or spasm. When the fossæ are full of secretion, they run over, excite cough, and, when of some quantity, the secretions are readily expelled. They may be viewed as a sort of expectoration reservoirs, like the gall or urinary bladders.

Another office, they form spaces into which the arytenoid cartilage may shut back—sort of gate recesses, or "enclave," in the locks of a canal—when the functions of phonation or cantation are not performed.

Pathological Conditions.—The pyriform fossæ are liable to disease, from the fact that when diseased secretions form above and run down the pharyngeal wall, they collect in these fossæ. In some cases, the tracks of these diseased secretions are marked by a path of linear ulcerated surface, sometimes straight, sometimes crooked, like the bed of a streamlet down a mountain side. The acridity is such that it seems to eat into the mucous membrane and plough it out by the loss of substance, the normal surface. Whether this is by a softening and washing away, or an actual solution of the mucous membrane, it is difficult to state. We see a similar action in cases of scarlatina, when the discharges run from the nostrils and burn off the skin almost like an inorganic acid. At any rate, we find a similar condition of things in the pyriform fossæ, as if nitric acid had been poured in. The mucous membrane is often denuded, leaving an ulcerated surface, ragged, rough and torn. In these cases, you often find one or both of the posterior pillars of the soft palate reddened, thickened and denuded. These often afford leading strings to the seat of difficulty.

Symptoms.—Sometimes there is considerable smarting and pain on swallowing, amounting almost to agony, so that the severest measures are welcomed and enjoyed, which in other individuals would be regarded as painful in the extreme. Allusion is made to scarification with knives until blood is discharged by the mouthful. There is also a dry, harassing cough, the ulceration feeling like a foreign substance, which instinct teaches to remove by cough. There is also a good deal of irritability of the throat—sometimes pain up by the ears. Usually, the patient can locate the spot by pressure just below the ends of the hyoid bone outside.

Diagnosis.—This is only made sure by means of the laryngoscope. A practised eye soon distinguishes the characteristic marks of the ulceration.

Treatment.—Topical stimulation by means of the nitrate of silver, chloride of gold, chloride of gold and sodium, and the liq. ferri persulphatis, U.S.P. The latter is a splendid agent. I am greatly indebted to Dr. G. L. Simmons, of Sacramento, Cal., for calling my especial attention to this agent. Also, scarification. In some cases this should be employed first.

Importance.—From my experience, I am led to conclude that these ulcerations are common, and hence have been led to write the present paper to call the attention of the profession to the ulceration of the pyriform fossæ. It is important that a careful diagnosis and exact treatment be made, as in this manner a large number of cases will be detected and much suffering prevented. Besides, there is no telling but that incurable diseases of the respiratory organs may be helped along by diseased conditions of the pyriform fossæ unchecked by topical medication.

Dr. Hodgdon reported the case of a woman, six months advanced in pregnancy, who determined to induce abortion herself. She succeeded by injecting oleum terebinth. into the os uteri, guiding the syringe with her own hand. The act was succeeded by pneumonia, from which she made a favorable recovery.

THE Indian Army Sanitary Commission states that "in fully developed *cholera*, verging towards, or already in, collapse, medicines were simply of no use." Recovery often follows collapse; but Indian medical experience proves that this recovery is rendered hopeless when *strong medicines*, such as large quantities of brandy and opium, are used. Such remedies are dangerous; yet, by carefully alleviating the symptoms by mild remedies—of which one of the best is simple cold water—by mild nourishment, and kind nursing, in a strictly recumbent position, many cases will recover which would, under different treatment, prove fatal.—*British Med. Journal,* Nov. 23, 1872, p. 585.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, MARCH 27, 1873.

WE find, in the *Lancet* of February 1873, an account of a "fatal operation under nitrous oxide gas, by Mr. Browne Mason (read before the Odontological Society)." We have no doubt that, after a time, the English medical profession will arrive at a proper estimate both of ether and nitrous oxide. Ether will gradually win its way to public favor, while the use of nitrous oxide will be restricted to those cases of short duration, especially in dentistry, to which it is adapted. In the meantime, English experimenters are stumbling about in that imperfect light which existed in this community nearly a quarter of a century ago, but which has been now replaced by a full and clear understanding both of the theory, the practice and the accidents of anæsthesia, whether by ether or by nitrous oxide. For the relations of asphyxia to nitrous oxide inhalation, and for its danger, we have only to refer to articles long since published in this JOURNAL by Dr. H. J. Bigelow, in which it was stated that the chemical combination of the oxygen in the nitrous oxide was so intimate as to make it very doubtful whether the lungs could appropriate oxygen enough from this gas to maintain vitality. The experiments alluded to, especially in protracted inhalation of the laughing gas, were attended with more or less asphyxia. A tonic spasm of the muscles, including the vocal cords, which Dr. Brown-Séquard has pointed out as a familiar result of asphyxia by hanging, was cited by Dr. Bigelow as equally a result of asphyxia from want of oxygen during the process of anæsthesia by ether, and especially by nitrous oxide. The vocal cords once thus spasmodically closed, themselves become a fresh cause of asphyxia, which demands prompt attention. In such cases, although it is usually sufficient to suspend the inhalation, it is often essential to put the finger within the cheek, possibly to force open the mouth, to grasp the tongue with the towel and to draw it out. We have never known these expedients, promptly resorted to, to fail in reproducing healthy respiration.

With these preliminary remarks, it may be anticipated that we are about to express an opinion that, in the case above cited, death resulted from simple asphyxia; not as from the shock of chloroform by a peculiar and inherent poison, neither to be foreseen nor averted, but in a way which a familiarity with the anæsthetic process would have rendered next to impossible.

A healthy female of 38, with a view to some minor dental operation, was seated in a chair, her face turned up, and the gas administered. A wooden gag was inserted between the jaws on the right side. After half a dozen respirations, the pulse becoming less rapid, it was decided to "do without" the gas, and a spear-pointed instrument was now thrust into the exposed pulp cavity. But it was found that the patient declined to submit to this painful operation without anæsthesia. She became hysterical, so that, after ten minutes, the gag was replaced and the inhalation was resumed. It is stated that just before losing consciousness she pushed away the inhaler, and that it was replaced and the inhalation continued. But it may be mentioned that there is some doubt whether the patient had any more gas after thus rejecting the inhaler. At this time there was no blueness, and some fangs were extracted. In three quarters of a minute blueness of the face was seen, but no action was taken with regard to it, as the observer "had heard of this discoloration occurring at gas administrations. The symptoms now became alarming; the features appeared puffy and swollen, the eyeballs protruding, the breathing thick and stertorous, the point of the tongue thrust between the teeth, but no convulsive movements were visible. The pulse and the appearance of the pupils at this period were not observed, attention being paid to more urgent matters. An old attendant, who was in the room, exclaimed, 'Take out the gag; she is choking!' This was the first suspicion Dr. Pattinson had that anything was going wrong. The gag was then forcibly removed."

Those who are familiar with such matters will not be surprised that an old nurse or ward tender should have urged the removal of the gag. Such persons often acquire a very valuable rule of thumb experience. From this time the patient breathed no more. A tablespoonful of water was found at the back of the mouth, which had lodged there while it was dashed over the face, and the head was drawn forwards to allow it to run out. In about three minutes artificial respiration was set up, but in vain. The "countenance was dusky, face swollen, eyes projecting, tongue in the mouth, mouth open." A few "faint expiratory movements" were made, and "the pulse beat regularly till two minutes after all respiratory movements had ceased."

We have endeavored to give a fair abstract of this case, and submit it, without further comment, to our readers, many of whom, at least in this community, are experts in the matter of anæsthetic inhalation; but we are free to say that, for the reasons above mentioned, we believe that after a few minutes' inhalation, the danger is greater with nitrous oxide than with sulphuric ether, mingled, as the latter always is, with an abundance of free oxygen in the accompanying air.

THE *Physician and Pharmacist*, Aug., 1872, has an account of a case of complete uterus bicornis, the septum extending into the one common cervix; pregnancy of the right horn; turning and extraction on account of pelvic contraction, the conjugate diameter measuring only two and a half inches. The case was communicated by Dr. Sell, Master of Obstetrics of the University of Vienna.

Prof. Carl Braun pronounced it the only case of complete uterus bicornis that he had seen in an extensive private and hospital practice of twenty years, including from seven to nine thousand cases which annually come under his observation in the wards of the General Hospital of Vienna.

The patient was a servant, æt. 31. She states that she began to menstruate in her fourteenth year; that the menses recurred every three weeks, lasting from three to four days without pain. She never had any illness of moment, but physically she had always been weak.

In 1870, she aborted in the sixth month of pregnancy. She also stated that she had given birth to one child before, but her assertions were considered doubtful.

Jan. 31, 1872.—The patient was admitted into the General Hospital, and a pregnancy of nine lunar months was diagnosticated. In Douglas's space could be felt a moveable tumor which was firm, somewhat globular, and about the size of the fist.

Feb. 1st, the patient was presented at Prof. Braun's clinic. The tumor was still in Douglas's space, somewhat to the left; it felt elastic and as if containing fluid. It did not arise from the bone, as an examination per rectum proved. Its globular form, and the absence of similar masses in the neighborhood, excluded the supposition of its being a feculant accumulation. Fibroid growth and carcinoma were also excluded. The uterus was inclined to the right; the child was small; all the circumstances of the case indicated a nine months' pregnancy. Labor set in on the morning of Feb. 3d.

The cervix being dilated, the finger could be passed into the tumor, and when withdrawn several pieces of decomposed membranes followed. From the very foul smell of these shreds of tissue, it was supposed by the assistants that the tumor might be a carcinoma which had eaten through the wall of the uterus.

About 5 P.M., Prof. Braun, having taken charge of the case, remarked that he had never seen a medullary carcinoma in Douglas's space in a pregnant woman; it might at most be a gelatinous cancer.

The patient having been chloroformed, Prof. Braun proceeded to make a thorough examination, the os uteri being sufficiently dilated to admit three fingers. The following was the result: The soft tumor could no longer be found in Douglas's space; it was pushed into the abdominal cavity. The projecting promontory of the sacrum could now be felt, and the amount of pelvic contraction accurately ascertained. The true conjugate diameter was only two and a half inches. Above, and to the left of the cervix, was a cavity which the finger could penetrate. It was filled with a soft, spongy structure.

To the right could be felt the pregnant uterus. The membranes were ruptured, and the head presented at the upper strait. Prof. Braun pronounced the following as his diagnosis: That the case was one of *uterus bicornis,* the soft tumor being the left horn; that the membranous shreds were portions of the decidua lining the unimpregnated horn.

Owing to the narrowness of the pelvis, the delivery was an exceedingly difficult proceeding. The child was turned and traction made, but the head could not be delivered. An unsuccessful attempt was made to apply the forceps. Finally, after another and more powerful effort had been made to deliver by traction, a female child was born. Its length was nineteen inches; its weight four (Vienna) pounds, fourteen ounces. It was deeply asphyxiated, but after prolonged efforts it breathed fully. It was found necessary to extract the placenta. A slight laceration was found on the right side of the cervix, and an abrasion on the vulva; otherwise there was no injury.

The uterus contracted firmly after the removal of the placenta, and it was now impossible to reach the left horn with the finger. It could, however, be felt through the upper part of the vaginal wall, as large as the pregnant uterus of two months.

The patient was discharged on the fourteenth day.

ORIGIN OF PUS CORPUSCLES *(Hoffman).*—It seems now pretty well established that the statement formerly made by Virchow, that the connective tissue is the one source of all inflammatory cells, was too wide, and that pus corpuscles are, in part, at least, derived from the white blood corpuscles. The next step, of course, is to the opposite extreme from that of Virchow, namely, to assert that the connective tissue takes no part in the production of pus corpuscles, and this extreme Cohnheim was not slow to reach. The present paper aims at a solution of the question in an experimental manner. The plan of the author's experiments was to charge the connective tissue of a living animal with vermilion-granules, and then to cause suppuration to be set up; and now if vermilion were found in the pus corpuscles it would be inferred that the latter arose from the connective tissue, and if not, that the contrary was the case. He found that when vermilion was injected into the vessels of a rabbit, it could be made to collect in considerable quantity within the connective tissue-cells of a given part, by irritating the part. Having thus got the connective tissue charged, he excised a portion of the tissue, and so induced suppuration, and found that the pus corpuscles contained no vermilion-granules. He concludes, therefore, that the fixed connective-tissue corpuscles do not take part in the formation of pus corpuscles, and that, as Cohnheim asserts, no source of pus corpuscles except the blood has yet been proved.—*Glasgow Medical Journal.*

A NEW METHOD OF CHANGING THE DIRECTION OF WILD HAIRS. By Prof. JULIAN J. CHISHOLM, M.D. *(Richmond and Louisville Med. Journal,* August, 1872.)—The best planned operation to correct the annoyance of inturning eyelashes often fails to afford the desired relief. The constant pulling out of these wild hairs not only insures their rapid growth, but increases the tendency of the lashes to deviate from their normal direction.

Prof. Chisholm made use of the following method of relief in a patient who for twenty years had assiduously pulled out the inturning eyelashes. When he presented himself for relief, the entire ciliary border of each eye was turned in upon the eyeball, so that the cornea had become completely opaque from the perpetual irritation of the hairs. In the right eye, a few lashes of the upper lid were turned in upon the cornea, threatening, in time, to destroy its transparency also. Upon this lid the following operation was practised, to make these hairs grow away from the eyeball and resume their normal direction. "A very fine curved needle was threaded with a double strand of fine silk; the point of the needle was then entered upon the tarsal border of the lid, at the very spot where the respective hair emerged from the lid-surface, and, being pushed outward, the front of the needle made its appearance through the skin just above the row of eye-lashes. When the needle had traversed the lid, the double thread, with a noose at its free extremity, was drawn upon until the noose was ready to disappear in the lid-tissues. The wild hair was now pushed gently through this noose, and, as the thread was drawn upon until it escaped from the cutaneous surface of the lid, it drew the vicious hair in the same direction, leaving it still attached to its hair-bulb (for this is all important), but drawn completely through the free border of the lid in a passage made for it by the needle, the point of the hair sticking out in front through the needle puncture. The *rationale* of the operation is, that the hair drawn through the lid will, by constant traction in its growth, change the position of the hair-bulb, and in this way correct the wild direction which it formerly took, to the serious injury of the patient."

Structural Composition of Urinary Calculi.—*The Lancet*, Feb. 15, 1873, notices a paper on this subject by Dr. Carter. The plan adopted was to submit fragments taken from the real or apparent nuclei, and from succeeding layer and crust of the nuclei examined, to the scrutiny of average optical powers, the highest being 300 diameters. Chemical tests were used conjointly for the purpose of detection or confirmation. The microscopical analysis was found to be more delicate than the simple chemical method. No urinary deposit long retains an unmixed character. The author discovered the frequent presence of urates in a globular form at the very beginning of the concretions. To this origin all varieties of calculous deposit may succeed. The next most common ingredient of the nucleus is oxalate of lime, in a form not generally recognized, viz., as large, rhombic crystals. Comparatively, seldom was the nucleus found to consist of uric acid crystals. Evidence was likewise elicited of the operation of known physical influence in determining the form which these globular and granular urates, commonly associated with oxalate of lime, assume in connection with stone. Dr. Carter refers to the modifying influence of a colloid medium upon the process of crystallization, as illustrated in Mr. Rainey's researches, and he concludes that urinary calculi should not be classed with ordinary concretions or mere mineral masses, although it is not evident that the animal basis of calculus, essential though it be, presents or retains a strictly cellular character.

Medical Miscellany.

Icthyornis dispar is the name given by Prof. Marsh to a newly discovered fossil having ornithic, piscine and reptilian affinities!

A useful form of disinfectant has been recently brought into use in England, namely, sawdust soaked in a saturated solution of carbolic acid. It is convenient for many purposes, cheap, easily prepared, and not liable to be swallowed accidentally, as ordinary liquid disinfectants are.

"Asylum Amenities."—Injuries inflicted upon patients in Insane Hospitals are generally the result of an inadequate number of servants in immediate attendance on the inmates. With a sufficient number of attendants always present, the most perverse patient, perceiving non-compliance utterly useless, will quietly submit. "Such was Conoly's advice thirty years ago."

Transplanting a Tooth.—Dr. Gerhart, in the *Dental Times*, records a case in which a boy's tooth was knocked out, carried in the pocket twenty-four hours, and then replaced in its socket. At the end of four months, this tooth looked as well as any of the boy's teeth, although it was necessary at the end of two months to devitalize it and pivot the root.

Digitalis an Anaphrodisiac.—M. Gourvat, in the course of a paper published in the *Gaz. Med. de Paris*, on the action of digitalis, says:—"When digitalis, or digitaline, is administered for some time to a man in full possession of sexual powers, these become gradually weakened, the propensities disappear, formation of the liquor seminis diminishes, and may at last cease altogether. The anaphrodisiac properties of the drug are the secret of its good effect in spermatorrhœa."

Pathology of Speech.—Speaking of the recent attempt to exclude Greek from the medical matriculation examination at the University of London, the *Lancet* says:—"There is no reason why a work on the pathology of tumors should incidentally illustrate to the linguist the pathology of speech; while, in the interests of professional culture, it is well that the physician and surgeon should not be inferior to the barrister or the divine in the acquisition that has always been prized in proportion to the refinement of the community."

On the same subject, the *Medical Times and Gazette* says:—"Nor can it be denied that classical education produces salutary results on the classes who can obtain it, and we do not hesitate to pronounce our opinion that the reputation enjoyed by clergymen and barristers, more than by members of our own profession, is owing, in a very large degree, to the various elements of their more classical education. . . . . . We may add that no man can know English thoroughly without some degree of acquaintance with Greek; nor is it easy to see how one ignorant of that language is to pick his way safely among scientific terms, which bristle with Greek roots in all directions."

Another Lecture by Dr. Brown-Sequard.—It will be remembered that, a few months ago, Dr. Brown-Séquard gave a lecture before the physicians of Boston and vicinity on the Symptoms of Diseases of the Brain, in which he enunciated his latest opinions concerning their origin and signification. Time, however, did not allow of more than an allusion to several important points, and Dr. Séquard promised his best endeavors to give a supplementary lecture on a future occasion. We are happy to be able to announce that this lecture will be given on Saturday evening, April 5th, at 8 o'clock, in the building of the Boston Society of Natural History. The subject will be the Mechanism of Production of Symptoms of Diseases of the Brain, and the Conclusions to be drawn from the Knowledge of that Mechanism for the Treatment of those Diseases.

THE *British Medical Journal*, noticing the prosecution of indecent quacks, says:—

"From the Deputy Recorder's charge in the recent case of Davidson and others connected with Kahn's museum, it is now clear that the indiscriminate circulation of a work treating of matters of an indecent kind is an obscene libel. Henceforth it will be easy to obtain convictions for this offence; and we trust that those who see the importance of putting down the disgraceful nuisance of indecent quasi-medical pamphlets will subscribe to the Quacks Prosecution Fund, not only to relieve the Society of its present liability, but to assist in future undertakings. Subscriptions may be sent to the Secretary, Society for the Suppression of Vice, 23 Lincoln's Inn Fields, W. C."

We regret that there are no means of punishing numerous instances of a similar kind in this city.

NOTES AND QUERIES.

ABORTIFACIENTS—WHAT ARE THEY?—According to the *London Lancet* a physician in Syracuse, U. S. A., has experimented upon *himself* with "abortifacients"; perhaps he may *now* tell us, from his own personal experience, what drug has the power to produce abortion.

MIDWIFE.

RE-UNION OF DISSEVERED PARTS.—A NUT FOR "HAY-CUTTER."—The newspapers describe "a remarkable surgical operation at Leipzig"; being "nothing less than the transfer of a dead man's brain to the skull of a living subject. The 'vile body' upon which this experiment was made was furnished in the person of a Prussian soldier condemned to death by military law for the murder of his colonel. The brain for transplantation was supplied by a good-natured saloon-keeper, who conveniently died in hospital of a disease of the heart. The process was naturally one of great delicacy. The condemned soldier was etherized in anticipation of the saloon-keeper's death, and dexterously scalped; and, as soon as the latter had comfortably yielded up his life, he was promptly laid upon an adjoining operating table, the two skulls were neatly uncapped and a transfer of brain effected. Such is the skill of the Leipzig surgeons, and such the excellence of modern scientific appliances, that no blood was lost, the brain fitted its bony casket to a nicety, the veins, arteries and nerves made connections, and the soldier was in a few weeks as lively as ever, save a slight soreness about the crown of his head. The only failure was in the approximation of the nerves of sight and of smell, leaving the soldier with the saloon-keeper's brain deficient in two senses."

Furthermore, "with the brain of the saloon-keeper there passed into the person of the soldier not only the knowledge of beer and of wine, with trade prices and an intimate acquaintance of sales and profits, but the amiable disposition and the homely peaceableness that distinguished that worthy victim of heart disease."

Io triumphe! Who shall foretell the future of science! Doubters avaunt!

SCALPEL.

MORTALITY IN MASSACHUSETTS.—*Deaths in fifteen Cities and Towns for the week ending March* 15, 1873.

Boston, 174—Charlestown, 18—Worcester, 11—Lowell, 11—Milford, 4—Cambridge, 17—Salem, 4—Lawrence, 5—Springfield, 5—Gloucester, 8—Fitchburg, 4—Newburyport, 3—Somerville, 5—Fall River, 26—Haverhill, 4. Total, 299.

Prevalent Diseases.—Consumption, 45—pneumonia, 29—scarlet fever, 12—croup and diphtheria, 11.

Nine deaths from smallpox are reported:—Four in Boston, three in Charlestown, and two in Gloucester.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, March 22d, 178. Males, 96; females, 82. Accident, 5—apoplexy, 5—inflammation of the bowels, 1—bronchitis, 5—congestion of the brain, 2—disease of the brain, 7—cancer, 5—cerebro-spinal meningitis, 10—cyanosis, 1—consumption, 35—convulsions, 8—croup, 2—debility, 3—diarrhœa, 1—dropsy of the brain, 2—diabetes, 1—executed, 1—scarlet fever, 16—typhoid fever, 3—gastritis, 2—disease of heart, 7—jaundice, 1—disease of the kidneys, 3—disease of the liver, 2—congestion of the lungs, 5—inflammation of the lungs, 13—marasmus, 2—malformation, 1—old age, 6—paralysis, 2—pleurisy, 1—premature birth, 4—puerperal disease, 3—rheumatism, 1—smallpox, 6—suicide, 1—teething, 1—tumor, 3—unknown, 1.

Under 5 years of age, 62—between 5 and 20 years, 20—between 20 and 40 years, 41—between 40 and 60 years, 32—over 60 years, 23. Born in the United States, 122—Ireland, 41—other places, 15.

THE

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Original Communications.

PARALYSIS IN INFANTS.

By S. G. Webber, M.D.

Read before the Boston Society for Medical Observation.

I propose to give, briefly, a few cases of paralysis occurring in infants, or very young children, with special reference to diagnosis.

The so-called infantile paralysis, or, as it has been called, the essential paralysis of children, is the most common form. Two cases may be enough to show the varieties in its mode of origin and course.

Case I.—Nannie W., seen Aug. 9, 1870. Aged 1½ years. When born, she was a healthy child; at about ten months of age she had an attack of diarrhœa, lasting three days; once she passed a little blood. She had a slight fever. One night she screamed out, and in the morning was noticed to have lost power over her legs. The right leg regained some power, but not much; it was practically useless; the right heel was slightly drawn up; the toes could be flexed, seemingly by voluntary action. The left leg hung limp and useless. The size of the legs, half way between the knee and ankle, was, right five and a half inches, left five and three eighths inches. Two inches above the knee, both legs were seven inches in circumference. The arms and body were well developed, and there was good use of the arms. The general health was good. The electric reaction is not recorded, and no treatment was adopted.

Case II.—Geo. D., sent to me from City Hospital, February 23, 1872. Aged 3 years; was naturally rather a bright boy. January 30, he went to bed well; was taken out of the bed during the night, and could not stand. Nothing was thought of this, but the next morning he could not walk. He had no pain until three days later, when there was pain in the left knee; also, to a less degree, in the right knee. The arms were not affected. There was no diarrhœa before the attack; possibly, however, he might have been a little feverish the day before and during the night; the next day, there was no feverishness. The left leg was the one affected; it improved somewhat, so that when I saw him he could sometimes move it a very little. He could creep, moving the hip, but the knee and ankle-joint could not be moved. He could stand on the right leg, not on the left. At first, the left leg was drawn up, and any attempt to straighten it caused pain. When seen, passive motion of the leg or thigh caused no pain; flexing the foot on the leg seemed to cause pain in the calf. On palpation, there seemed to be pain in the left hip, but scarcely more than in the right. On forcibly and suddenly pressing the thigh against the acetabulum, there seemed to be some discomfort, but not much. The pain did not seem to be acute. He pointed frequently to the left knee as painful, but not to the same spot each time, and sometimes complained of the right side. The left leg was at this time but slightly less in size than the right. No measurements were taken.

The muscles on the anterior aspect of the left leg did not respond to any strength of the faradaic current which I felt justified in using. Those of the right responded well.

The same muscles of the left leg responded to 10 Daniels elements. Those of the right responded only slightly to 16; it required 20 cells to obtain a marked action.

The gastrocnemius on the left contracted under 18 to 20 cells; on the right only with 25 cells.

After two applications of electricity, after nine days, he stood up by a chair, and the next day, in my office, he stood alone unsupported; he could also flex the ankle a very little. Ten days later, after four applications, he walked across the room by putting the right leg forward and then drawing up the left leg.

He continued to gain, the reaction to the galvanic current gradually diminishing, till, on March 29th, the thirteenth application, a painful current was required to move the muscles of the thigh. On May 13th, it is noted that the leg had wasted considerably, and he could run tolerably well. Two days later, the muscles responded slightly to the faradaic current. The foot rotated outwards during walking. The sensitiveness to the induced current increased slowly but steadily; the muscles of the thigh gained most in this respect. He also acquired some power to rotate the foot inwards.

When last seen, he could walk and run well, had most of the motions of the foot; but in walking there was a tendency in the foot to roll over, so that he walked on the inner side. As he could not be brought to me regularly, I advised the use of a support for his ankle, and that he should be exercised in the proper use of the muscles. Twenty-nine applications of electricity were made during nearly six months.

These cases are good examples of this affection. The distinctive symptoms may be enumerated as follows:—A sudden attack of paralysis, preceded by only a slight fever, diarrhœa, or, perhaps, merely a slight dulness or heaviness. Rarely is a convulsion the precursor of this affection. I have never seen such a case, and suspect that when there is more than one convulsive attack there must be other cerebral symptoms, and that it would be found to belong to the next group of cases. As in the second case, the child may be put to bed seemingly well, and awake paralyzed. The paralysis is worst at first, and chiefly in the legs; the arms may be affected.

There is more or less improvement for a variable length of time; then the paralysis becomes stationary. The reaction of the muscles to the faradaic current is lost early, after a few weeks at latest. It may disappear during the use of electricity as a remedy. The reaction to the galvanic current is almost always increased at first, and is lost only at a much later period. After a few weeks, atrophy sets in, and may make rapid progress; the limb may cease to grow, or grow much less than its fellow. In one patient there was a difference of about three-fourths of an inch in the length of the legs, after four or five years. In others, this difference in length is not so marked. As in the second case, the atrophy may be increasing even while the power of voluntary motion is returning. It would seem that certain muscular fibres are irreparably injured and disappear before others can be formed to take their place. In the second case, voluntary motion returned long before the reaction to the faradaic current was reëstablished.

In the next group of cases, I shall include paralysis of cerebral origin, not hydrocephalic. Between these and infantile paralysis there are characteristic differences, both in the earlier symptoms and in the later stages. They have, however, been confounded, even by Niemeyer and Eulenberg; and many writers, while referring to a distinction between the two, seem not to draw the line of separation very definitely.

Case III.—Mary G., æt. 6½ years, seen first on June 12, 1868. When about a year and a half old she had convulsions, lasting from 3, P.M., to 1, A.M., and recurring occasionally for several weeks. She was dull, and seemingly had some fever. After this, the right side was paralyzed, the hand more than the leg. The right hand became permanently somewhat drawn up, the thumb drawn in, and the arm slightly rigid.

When about 3½ years old, she began to have spasms, which were not much more frequent when I saw her than at first. These attacks are sometimes foreseen by the patient, she screaming out just before they occur; she falls down, sometimes urinates and sometimes laughs. The left side is actively convulsed; the right side is stiff. During the attack, she turns purple in the face; before it, her face flushes, afterwards is pale; sometimes she froths at the mouth, loses consciousness, then becomes sleepy. This is the character of the more severe fits. Lighter ones may consist only in a change of countenance. Has them sometimes at night.

When seen, she limped with the right foot in walking, her right ankle turned over slightly, the toe dragged some. She could not flex the toes of the right foot nor her right ankle fully; she could not flex the right knee so well as the left; she could flex both thighs.

She could raise her right arm only as high as the shoulder, and that with great exertion. It was very difficult for her to shut her right hand; she could not extend it.

The right leg, six and one-half inches above the external malleolus, measured nine and seven-eighths inches in circumference. Four inches above the condyle, the left arm measured seven and five-eighths inches, the right, seven and one-eighth. The fore-arms were alike. The mouth was drawn a little to the right; the tongue generally protruded straight; the sight of the left eye was better than that of the right. The right pupil was sluggish. Hearing was alike on the two sides. Sense of touch was not affected. She learned her letters easily and to spell, but seemed to forget easily. She had certain choraic movements.

All the muscles of the leg responded to the faradaic current, and, after a few applications, gained somewhat. Those of the arm responded, also, but the extensor sublimis, supinator longus and extensores carpi less than the others.

A mixture containing the bromides of potassium and ammonium was given. The epileptic fits were less frequent and less severe while she took the medicine; it was not given regularly, however, and after a few weeks she passed from my notice.

Case IV.—The next case is that of a girl sent to me by Dr. Minot. P. R., æt. nearly 5 years, a large child at birth, was healthy until 10 months of age; then she had an attack of convulsions. The spasms were light at first; they lasted three days, and during the last nine hours there was loss of consciousness. The left side was paralyzed, and remained so after the cessation of the convulsions. As her strength returned, the paralysis diminished. This attack occurred on a hot day, but it was not known that the child was overheated.

The left side of her face was smaller than the other; both sides moved when she talked, but the left less than the right.

Left arm, over biceps, measured six and one-fourth inches.
Right " " " " seven "
Left arm, below elbow, " five and three-fourths "
Right " " " " six and three-eighths "
Left leg, around calf, " eight and one-fourth "
Right " " " " eight and three-eighths "
Left thigh, four inches above knee, measured ten "
Right thigh, do. do., measured ten and five-eighths "

The left arm could be moved from the shoulder-joint pretty fairly, but not so well backwards as forwards; the elbow could be flexed only about one-half; the forearm could not be rotated; there was no power over the wrist or fingers, but on attempting certain movements there was extension of the fingers. When seen, the fingers were contracted, though during sleep they relaxed, and when she awoke and stretched, both arms moved alike naturally.

She walked well and, at times, naturally, but once in a while gave a peculiar little hop; she stood on the right foot easily, and held up the left with a little difficulty; she stood on the left for a short time, half a minute or so, and held the right up without difficulty.

The right side of the body was a little larger than the left; the tongue protruded straight, but the left side was rather the smaller. The right pupil contracted less readily than the left. Both eyes converged, following the finger until it was about four inches distant, then the left eye turned to the left. Sensation was equal in the two hands.

The muscles of the left arm responded fairly to the induced current, making allowance for the contraction of the fingers which interfered with their motion. They acted less readily than those of the right arm. To the galvanic current, the extensors on the left forearm responded with two cells less than the right arm. The uninterrupted galvanic current, from the back of the neck to the contracted muscles, caused relaxation.

With faradaic current, the muscles of the left leg acted well with the spinal-cord-nerve current, but less readily with the spinal-cord-muscle current. With galvanic current, it was the same. The extensors of the thigh, also, acted well.

In the summers of 1870 and 1871, she had two series of slight attacks, the last one worse. She stepped on the left foot, turned a little to the left, with a slight puffing and blowing, and looked up to her mother as if she held her breath for a minute. No loss of color was remembered. Going into the hot sun brought on the attacks; there were several a day while they lasted. Change to the sea-shore and bromide of potassium caused them to cease.

She was seen only a few times, and there was no marked change in her condition during the week she remained here.

About the same time that this last patient was seen, I saw another case almost identical with it, except that the paralysis was much less marked, but the epileptic attacks were more severe.

In the three cases, there were convulsions, lasting for several hours, or even days. These were followed by hemiplegia, more or less persistent, with more or less contraction of the paralyzed limbs, and perhaps slight affection of the mind. In one case, the one-sided atrophy was a peculiarly interesting symptom. In the three, epileptic convulsions occurred some years after the origin of the difficulty. In two cases, the reaction of the muscles to the faradaic current was retained, even after years of partial disuse, with considerable atrophy. In the other case, voluntary motion was so nearly perfect that the electric reaction was not tested.

The diagnostic symptoms of infantile paralysis may be briefly stated, for comparison with the above, as:—sudden paralysis after very slight constitutional disturbance—this is worse at first; early change of electric irritability and early wasting without contractions; when vicious postures are taken, they generally occur later, and are due to retraction of still active muscles.

In well-marked cases, where a full history can be obtained, it is not difficult to diagnosticate these two forms of paralysis. Where the history is imperfect, and only the fact of paralysis is known, it may, in some cases, be difficult to form an opinion. In such a case, the presence of contractions and persistence of faradaic contractility, after the paralysis has persisted for any length of time, would be valuable guides.

A few cases occur in which caries of the vertebræ causes paralysis, the history is rather obscure, and the child too young to tell where the suffering is situated. If the child is fat and the back not deformed, a diagnosis may not be easy. The following case may illustrate this.

Case V.—Lizzie L., seen lately, æt. 15 months; when young, used her legs like other children. Last spring or summer she lost control over them. Her grandmother did not know whether this loss of power came on suddenly or gradually; from what she said, it was more likely that the loss did not appear suddenly. There was no diarrhœa, no fever, no convulsions. During last summer, her health was noticed to be failing, and she was taken to the sea-shore. There she slept much, had loss of appetite, emaciated, no diarrhœa. When held up, she cried. The general health had improved, and when I saw her she was quite fleshy. I found that when lying on her stomach the back was nearly straight, but when she sat up there was slight bulging out of the spine in the upper lumbar region, involving three or four vertebræ. There was no tenderness on pressure. The legs were nearly equal in size, the right perhaps a trifle the smaller. Sensation seemed to be retained, as, on tickling or patting the foot or leg, the leg was withdrawn. There had been a gain in motor power, but she moved her legs spontaneously only occasionally. The reaction to the faradaic current was retained in both legs, and seemed to be in the thighs, though they were so fat it was not easy to test them. A corset support was obtained, and, a month later, there had been very great improvement, though no attempt had been made to walk.

In this case, the diagnosis was made as much by means of the absence of some symptoms as by the presence of others. The deformity of the back was so slight it might easily have been mistaken for the natural rounding of the back when the child sat up; but, in connection with the other symptoms, was valuable as confirming the diagnosis.

In another case, I had an opportunity of watching the gradual development of the paralysis, with many other symptoms, which clearly indicated the nature of the disease ; but if the case had not been seen so early, it might not have been possible to have obtained these data from the parents.

(To be concluded.)

Clinical Lecture.

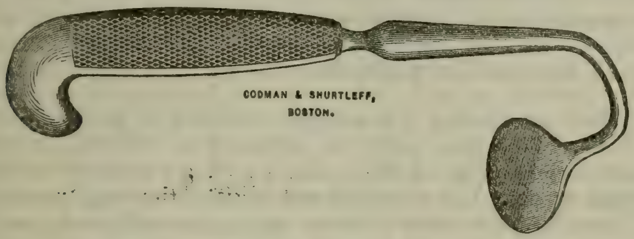
ON DISEASES OF THE THROAT.

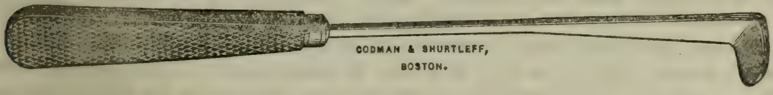
By F. I. Knight, M.D. Harv.

The Rhinoscope.

The term rhinoscope is now usually applied to that instrument by means of which we are enabled to obtain a view of the naso-pharyngeal space. It is unnecessary to speak of the importance of any instrument, which enables us to see parts whose condition may be in question and to treat them locally, if desirable, with precision.

As early as 1743, an attempt at rhinoscopy is said to have been made by Levret, and at different periods, since that time, attempts, more or less successful, have been made by others. It remained, however, for Czermâk, soon after his discovery of the practicability of laryngoscopy, to establish, also, the practicability of rhinoscopy. His title to this latter discovery no one has disputed. In order to practise rhinoscopy, you will require a good illumination of the pharynx and a mirror similar to that used for laryngoscopy, but usually considerably smaller, whose reflecting surface, being held in the pharynx, is to be directed upward and forward, instead of downward and forward. An instrument for depressing the tongue is, also, usually necessary, as well as sometimes an instrument for drawing forward and raising the soft palate. The illumination you can obtain in the same ways as for laryngoscopy. Of the various tongue depressors which have been invented, that of Türck is the best suited to the majority of cases, inasmuch as, on account of its peculiar shape, it can be made to depress the tongue far below the level of the lower teeth. For raising the soft palate, when this is necessary, this simple, broad palate hook, suggested by Czermâk, is sufficient for examination. In case of operation, however, you cannot spare one hand to hold this hook, and if the instrument with which you are operating is not of such shape as to raise the palate sufficiently of itself, you can, by means of this small, silver tube, easily slip a noose over the uvula and, drawing it tightly, can then pull forward and upward the soft palate, and attach the other end of the lasso to a band upon the patient's head. Of course, all patients cannot be made to bear such a contriv-





ance as this within a reasonable amount of time, but it is much better borne than you would naturally expect. I had no trouble in using it in the case of a young lady from whom I removed two polypi, which were so situated that I could not well get at them without some contrivance for holding up the soft palate.

To make a rhinoscopic examination, you will proceed as follows: Let the patient sit opposite you, with his head erect instead of being inclined backward, as for laryngoscopy. This latter position has been suggested, however, by Moura, with the object of bringing the posterior nares into a better position for illumination; and an inclination of the head forwards, has been suggested by Voltolini, so that the uvula and soft palate should hang a little forward from their natural position. But, on the whole, an erect position of the head seems to me to be the most desirable. You then secure a proper illumination of the pharynx in one of the methods described to you in my remarks on laryngoscopy.

If both hands are to be used, however, it is well to have the light, if artificial, put a little higher than usual, so that your left hand may not cut off any of the rays. You then warn the patient, as before, that you are not going to hurt him and request him to breathe regularly, and to try not to swallow or gag. You then request him to open his mouth as widely as possible, and placing the spatula, held in your left hand, well back upon the tongue, you depress it sufficiently to give you room for illumination and a proper position of your mirror. If the tongue spatula is put upon the tongue too far forward, the base of the tongue will very likely rise up as a serious obstacle to your examination. If, on the contrary, it is put too far back, it is likely to produce gagging at once.

The tongue having been properly depressed, however, you warm your little mirror (the one which I usually use is about five-eighths of an inch in diameter), and introduce it, with your right hand, with its reflecting surface upward, under the arch between the uvula and soft palate; then, by moving it about and inclining it at different angles under both arches and under the uvula, you will see, in turn, the images of more or less of the parts, which go to make up the naso-pharyngeal space. It is often difficult to get a thoroughly satisfactory view of the posterior nares without raising the soft palate, and this is particularly true of the lower part of them. It is best, however, to try, in the first place, to see all you can with as little irritation of the throat as possible, because, by a little extra amount of irritation of the fauces, you may deprive yourself of the opportunity of getting even an imperfect sight of the nares at that visit. If the soft palate shows a tendency to constantly rise up and apply itself against the pharynx, you will direct your patient to try to breathe through the nose, and if this does not succeed in bringing it down, you may try the suggestion of Czermâk, to cause the patient to try to emit some nasal sound, the French "en" being suggested by him. When, however, you have seen all you can with the tongue depressor and mirror alone, you transfer the tongue depressor from your own hand to the right hand of the patient, with directions for him to keep the tongue well depressed and the instrument in the angle of the mouth on the right side. You then, having warmed the palate hook, pass it gently under the soft palate, with the left hand, gently raise it upward and forward, and hold it steadily by resting your hand upon the patient's face. You then proceed, with the mirror in the right hand as before. If there is a resistance to the introduction of the hook on the part of the soft palate, causing the patient to breathe through the nose or to emit a nasal sound may overcome this. On the occurrence of gagging, the instrument must be immediately withdrawn.

The parts of which you will obtain an image by varying the position of the rhinoscopic mirror, after its introduction, are the following:—the nasal septum, narrow and of a pale yellowish color below, broader and redder above; on either side of this, the posterior openings of the nares; and at the lower part of the latter, the ends of the inferior turbinated bones; at their sides, directed inward and downward, the middle turbinated bones; and, above, usually a little of the superior turbinated bones; below the openings of the nares, is seen the image of the posterior surface of the soft palate; farther out on each side, is seen a yellowish triangle, bounded, as it appears in the image, below and above by very prominent swellings, at the external angle of which the pharyngeal opening of the Eustachian tube is situated; the depression running upward and outward above the swelling over the Eustachian tube is the fossa of Rosenmüller, into which the Eustachian catheter has been sometimes passed by mistake; in the upper part of the picture, we see the vault of the pharynx, which is the seat of a bunch of glands which are often seen to be enlarged; and contiguous to this are the posterior and lateral walls of the pharynx.

The color of the various parts is:—of the lower part of the septum, as we have before said, and of the triangular spaces about the openings of the Eustachian tubes, pale yellowish, sometimes reddish yellow; of the turbinated bones, greyish, so that they resemble polypi, and when enlarged, have even been operated upon as such; the other parts are red.

The obstacles to a successful examination of the naso-pharyngeal space are as follows:—

1. General irritability of the fauces, which must be overcome in the same manner, as directed for laryngoscopic examination.

2. A peculiar involuntary resistance of the tongue, when an attempt is made to depress it with a spatula, which is overcome by employing firm and steady pressure upon it.

3. A drawing up of the uvula against the pharynx during respiration, which is sometimes voluntary in patients who have been in the habit of exhibiting their throats without any depression of the tongue. This can usually be brought down by requesting the patient to breathe through the nose, or to emit a nasal sound, and they must try to learn to let it hang away from the pharynx.

4. Enlarged tonsils and elongated uvula. It may be necessary to remove the former, but the latter can be held out of the way by the palate hook.

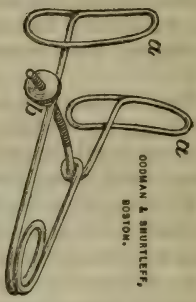
5. Want of space between the soft palate and the posterior wall of the pharynx, in some cases little space existing naturally, in some it being much diminished by inflammatory swellings, &c., and in others adhesions existing between the palate and pharynx.

Let me say a word here in regard to the examination of the nares anteriorly, which Dr. Cohen suggests may be called anterior rhinoscopy, as the examination of the naso-pharyngeal space is posterior rhinoscopy. You will see among practitioners a great neglect of the proper illumination of the anterior nares, in the examination particularly of cases of polypus, the diagnosis and treatment of which are so much facilitated by a good view. Oftentimes, the attachment of a polypus can be seen and a snare or very slender forceps may be used, seizing only the pedicle, instead of the ordinary clumsy forceps, which cause so much pain. Many of you have seen a case recently in this clinic, which illustrated the necessity of a proper examination of the nares. Those of you who were here at her first visit will remember that she stated that she had been removing for several weeks previously large masses of dried bloody matter from her nose by means of a hair pin ; and that those physicians to whom she had applied regarding it, did not examine inside the nostrils. You will remember that, on examination by means of a nasal dilator and reflected light, we found a large perforation of the septum, filled up to a considerable extent by a large mass of dried blood and purulent matter, which extended more or less into either nostril and thereby seriously impeded respiration. On removing this, we found a raw ulcerating edge about the perforation. A few days' treatment relieved all discomfort and put her on the road to a rapid and complete recovery.

You can oftentimes examine the nares anteriorly with satisfactory result by employing direct sunlight, the patient being seated facing the sun, with his head thrown back and the point of the nose pushed up and the nostril dilated. But you can usually examine more conveniently and thoroughly with the aid of a reflector, still using sunlight if you can get it.

For dilating the nostrils, the old-fashioned, two-bladed aural speculum does very well, but this instrument, devised by Dr. Norton Folsom, and described by him in the *New York Medical Gazette,* I like much better, if the patient can bear the pressure of the spring, which he usually can do. It is similar to Thudichum's nasal dilator, but is lighter, and is provided with a screw, by means of which the extent of dilatation can be regulated. It is compressed, and then introduced and allowed to expand.

Voltolini at one time proposed introducing a bright rod and illuminating the passage by reflections from this.



But this method has never been much employed, so far as I know, and Voltolini himself anticipated serious objections to it from constriction of the nares, deviation of the septum, &c. By illuminating the anterior nares properly, we may see a part of the *middle* and the anterior end of the *inferior* turbinated bones, and a part of the septum and floor of the passage. In exceptional cases, even the posterior wall of the pharynx may be seen.

In reply to the question which might naturally be asked by you, "Of what practical use will posterior rhinoscopy be to us?" I will answer, briefly, that it will enable you to catheterize the Eustachian tube, diagnosticate and treat neoplasms, inflammation and its sequences, ulcerations, hypertrophies and indurations occurring in the naso-pharyngeal space, with a precision wholly unattainable without it. In conclusion, I will call your attention to this excellect preparation of the skull and throat, one which is seldom seen, showing the relations of the larynx, pharynx and posterior nares to each other. A glance at the naso-pharyngeal space will show you, perhaps, that the mirror has given you an entirely erroneous impression of the relation of parts to each other; but in the nature of things this can in no way be avoided. A cross-section, also, in front, shows you the turbinated bones anteriorly.

If the image as seen in the mirror is hard to interpret properly, so much the more difficult is it to produce a picture which shall convey a proper idea of the relations of parts. The painting of Heitzmann, which you see hanging opposite that of the larynx, is a very good representation of the rhinoscopic image, the coloring, even, being quite true to nature.

Progress in Medicine.

REPORT ON OTOLOGY.*

By J. Orne Green, M.D.

Anatomy and Physiology.

Ruedinger.—Beiträge zur Histologie des Mittleren Ohres. München. 1873.

Burnett.—Bloodvessels of the Membrana Tympani. Amer. Jour. Med. Sciences. Jan., 1873.

Zuckerkandi.—Ueber die Arteria Stapedia des Menschen. Monatschrift für Ohrenheilkunde. Jan., 1873.

Weber, F. E.—Der Musculus Tensor Tympani. Idem. Oct., 1872.

Mack.—Zur Theorie des Gehörorgans. Prag. 1872.

Lucæ.—Zur Diagnostichen Verwerthung der Schalleitung durch die Kopfknochen. Berliner Klin. Wochenschrift. 1871.

Lucæ.—Maximal Phonometer. Idem. 1872.

Berthold.—Taube Puncte des Ohres. Idem. 1872.

The histology of the middle ear has been made the subject of minute study by Rüdinger for a long time, and the observations of so accomplished an anatomist are worthy of more extended notice than is here possible. But a few of his observations, more especially on some of the points of controversy which have arisen of late years, can be mentioned in this paper.

The surface of the ossicula consists of general lamellæ, which enclose bone-corpuscles throughout, and, in their deeper layers, also, groups of so-called giant cells. The canals of Havers resemble those in the short bones of the extremities and unite in a large central cavity, the medullary cavity. Specimens of osteophorosis and of osteosclerosis were also found. The cartilaginous layer over the hammer, which was first described by Gruber as a distinct tissue, and one which played an important rôle in the movements of that bone, but which has been considered by Prussak and others as merely belonging to the periosteum, Rüdinger allows to be distinct from the hammer, but describes it somewhat differently from Gruber. At the lower end of the manubrium, the layers covering the hammer are a fibrous tissue containing cartilage cells, which he calls fibrous cartilage; within this, and closely surrounding the whole hammer, is a layer of pure hyaline cartilage, the boundary between the two forms of cartilage being very distinct. This hyaline cartilage, Rüdinger acknowledges, may be the remains of the fœtal cartilaginous hammer, but, as Gruber says, it persists through life. The resemblance of these cartilaginous layers on the hammer to the cartilages seen in the joints of the ossicula, lead Rüdinger to think that they are special histological media for the transmission of sound-waves. The cartilaginous layers are still found the same, but varying a little in thickness as we pass up the hammer, but that bone itself is more and more isolated from the membrana tympani. As we approach the short process, the layer of hyaline cartilage becomes gradually thicker on the external edge of the hammer, and thinner on the other surfaces, till, at the point of the short process, it has entirely disappeared, except externally, where it forms a thick bolster closely attached to the bone. The space between this cartilaginous bolster and the short process, which Gruber describes, could not be found by Rüdinger, but on each side of the cartilage is an angle, filled in with connective tissue, in which spaces exist, the walls of which are of variable thickness. These spaces he considers to be vessels and not a discontinuity between the cartilage and the membrana tympani.

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* Second semi-annual Report.

The pouches of the membrana tympani, described by Troeltsch as duplicatures of the membrana propria, but by Gruber and Henle as simply folds of the mucous membrane, Rüdinger says contain a strong layer of parallel fibres, resembling the radial fibres of the membrane, and serve as ligaments to hold the hammer, on which account he has named them the pouch-ligaments of the membrana tympani. The other ligaments he has described nearly as given by other authors.

The ring in which the membrana tympani is inserted, called by older writers the annulus cartilagineus, contains, in the human being, no cartilage, but is composed of fibrous tissue, a continuation of the periosteum, and, therefore, named by Rüdinger the annulus fibrosus.

After careful study of the articulations of the ossicula, Rüdinger reasserts what he has already published (*Virchow's Archiv*, 1860). Both in the articulation between the malleus and incus, the incus and processus lenticularis and the processus lenticularis and stapes, a freely movable meniscus of cartilage is found, thus making a joint of two chambers as is found at the clavicle. The tendon of the stapedius muscle is attached not only to the stapes but also to the capsule of the joint and the processus lenticularis.

By means of preparations colored with chloride of gold, Burnett has studied the arrangement of the bloodvessels and nerves of the membrana tympani in different animals, and finds that they vary somewhat from the arrangement found in the human membrane. In the dog, cat, goat and rabbit, small vessels pass from the periphery towards the manubrium, and, also, from the manubrium towards the periphery, at nearly equal distances from each other; and then turn abruptly towards their starting point, thus forming a series of vascular loops. In the Guinea-pig, however, the vessels form a net-work of coarse quadrangular or pentagonal meshes, an arrangement similar to that in man, except that the meshes are coarser and the vessels finer. These arrangements of the vessels Burnett has found constant and peculiar to these animals.

The arteria stapedia, generally described as abnormal, Zuckerkandi affirms to be constant, taking its origin from the arteria stylo-mastoidea which enters the tympanum above the foramen ovale. It gives off a branch to each arm of the stapes and one to the base of that bone, and anastomoses with a branch of the arteria nerv. tympani comitans, or else with the arterial plexus of the promontory.

The tensor tympani muscle is surrounded throughout its entire course by a fibrous sheath, arising from the roof of the tubal cartilage and from the edge of the fibro-cartilago basilaris and passing along the entire muscle. The tympanic sheath of the muscle which has been considered to be mucous membrane, Weber has found to be fibrous tissue, a continuation of the sheath covering the muscle within the osseous canal. The muscle itself takes its origin only from the posterior cartilage of the Eustachian tube and three bundles of fibres, an outer, middle and inner, arise from this tissue to form the muscle. The length of the tendon of the muscle, from the rostrum cochleare to its insertion on the hammer, Weber gives at two and one-fourth millimetres, and its direction somewhat forwards and downwards. Its insertion on the hammer is three and three-fourths millimetres above the end of the manubrium, and four and one-half millimetres below the top of the hammer.

Mach agrees with Helmholtz that the conduction of sound to the labyrinth-water takes place by vibrations of the ossicula as solid bodies, and not by vibration of the separate molecules composing them ; and also with the theory of Seebach in regard to the manner in which the tympanic apparatus is enabled to conduct oscillations of various durations equally well. He then considers the question of how the arrangement of the tympanic apparatus in separate masses, each of which possesses special elastic power, must act, and by calculation concludes that this arrangement must increase or diminish the tones according to the condition of these masses. The tympanic apparatus, then, does not conduct all tones equally well, but rather always favors some particular part of the scale of notes, the part favored, however, depending on the tension of the tensor tympani muscle. In addition to the accommodative function of the tensor tympani muscle in varying the tension of the membrana tympani, Mach would thus assign to this muscle the ability to change the conducting power of the whole tympanic apparatus.

In explanation of the established fact that, when a vibrating tuning-fork is placed against the bones of the skull and one ear is tightly closed, the fundamental tone of the fork will be heard louder in the closed than in the open ear, Mach had advanced the theory that a certain amount of the sound which generally passed out of the meatus and was lost to our perception was, by the closure of the meatus, reflected back on to the labyrinth, and thus produced a greater impression on the closed than on the open ear. This idea was based on the theory of Duhamel that the force of a sound is always measured by the difference between the influx and efflux, and must vary whenever the influx or efflux is disturbed. Lucæ, however, considers himself justified, from experiments, in denying any such efflux of the sound, and affirms, moreover, that the reinforcement of the tone is entirely dependent on the length of the column of air in the closed ear, i.e. on the proportion existing between the length of the air-column and the length of the waves of the tone employed. If the tone c′ is used and the length of the meatus is increased by the insertion of a rubber tube eleven inches long, thus making the column of air one-fourth the length of the sound-wave, the fundamental tone is deadened and its octave is heard distinctly; if the column of air is increased to twenty-four inches, the fundamental tone is again reinforced, since the course of the reflected waves is equal to the whole length of a wave of the tone c′.

Other observations of Lucæ on the influence which the direction of the vibrations in the bones of the skull exert on the amplitude of the vibrations of the membrana tympani show that the vibrations of the membrane are greatest when the waves of sound strike perpendicularly to the plane of the membrane. This fact can be demonstrated by closing both ear-passages and placing a deep tuning-fork on the centre of the head; the tone will then be perceived equally strong in each ear. If the fork is now moved to one side, to a point perpendicular to the plane of the opposite membrane of the drum, the tone will be heard strongly and almost entirely in that ear.

Lucæ has constructed an instrument for the purpose of measuring exactly the pressure of the breath exerted in speaking, i.e. the intensity of the speech. It consists of a paste-board cylinder, 190 millimetres long and 48 millimetres in diameter, one end of which is funnel-shaped, and covered at the edge with a roller of rubber so that it can be applied tightly over the mouth. The other end is closed by a membrane of rubber, so stretched that the slightest compression of the air in the tube will move it. On the edge of the tube a light metallic lever is attached, the lower end resting on the centre of the rubber membrane, and the upper end moving over a quadrant marked in degrees and attached to the body of the instrument. Any word then spoken into the tube presses the rubber membrane, and with it the lower end of the lever, outwards, while the upper end of the lever is pressed in the opposite direction over the quadrant on which the extent of its motion can be measured. A very light spiral-spring presses the lever against the quadrant so that it remains at the point of maximum motion. The instrument has the practical value of determining empirically the intensity of one and the same spoken word, and, therefore, gives a more exact test of the hearing for language than was before possible.

In regard to the alphabet, it is found that the maximal intensity is greatest for the explosives B, G, D, P, K, T (18°–38°); least for the letters S, W, C, Z, I, L, F, V and R (2°–12°), while the vowels have a value of 9°–15°, and Sch, X and H a value of 14°–19°.

These values are not, however, proportional to the ease with which the letter is perceived by the ear, with the exception of the letters P, T, B, I, for the instrument can merely measure the pressure of the air used in forming a letter, while certain letters, especially the vowels, and the consonants F, Sch, Ch and S before a vowel, are increased in intensity by the resonance of the cavity of the mouth without a great pressure of air, consequently their intensity is greater for the ear than for the phonometer.

PATHOLOGY.

LUCÆ.—Die so-genannten Corpora Amylacea. Virchow's Arch. 1872.

FUERSTNER.—Othæmatoma. Archiv für Psychiatrie, iii.

BUCK.—Unusual Cases. New York Medical Record, Dec., 1872.

WENDT.—Ueber das Verhalten des Gehörorgans bei Variola. Archiv der Heilkunde, 1872.

Lucæ re-asserts that the so-called corpora amylacea of the membranous semi-circular canals are a pathological formation peculiar to the adult human being. He has never found them in the new-born child, but considers them to be produced either by local disturbances or general disease. He has found them in gray degeneration of the spinal cord, typhus and typhoid fever, tumor of the brain, tuberculosis, Bright's disease, chronic ulcer of the stomach, and also in cases where there was a disease of the ear at time of death, as, for instance, otitis media.

Rüdinger, on the contrary, asserts that he has always been able to find them, at least partially developed, in man, and that, therefore, they are natural structures; their reaction with iodine is the same, he says, as that shown by the tunica propria and other tissues in which no starch exists. He considers them papillary prominences on the inner surface of the tunica propria of the membranous canal, their function possibly being to supply a large secreting surface.

In order to determine the cause of othæmatoma, Fürstner has examined the auricles taken from one hundred and thirty individuals of all ages, without reference to the cause of death, and arrived at the following conclusions. In opposition to the conclusions of other investigators, he asserts that the cartilage itself contains no vessels, but that conical projections of perichondrium, with their vessels, run into its substance. Often in early life, and always in old age, the cartilage of the auricle undergoes the same changes which have been observed in other cartilages, namely, a softening consisting of three stages—the hyaline metamorphosis, the fibrillary and granular destruction, and, finally, the liquefaction of the cartilage, with the formation of cavities. The cavities so formed contain fluid, reacting like mucin, and frequently occupy the whole thickness of the cartilage, presenting the appearance of a line of fracture; the absence of pigment and hæmatoidin crystals proves, however, that no fracture has taken place. Other changes in the cartilage of the auricle consist of new-formations; enchondroses, in which, by a retrograde metamorphosis, cavities are formed, or calcification or ossification may take place; and enchondromæ, which Fürstner found to be rare.

Othæmatoma he regards as always of traumatic origin, favored, perhaps, by some of these chronic changes in the cartilage; the possibility of their spontaneous development from some peculiarity of the vessels, he absolutely denies. One preparation of an othæmatoma showed distinctly the results of an injury, together with the preceding chronic process of degeneration. If, as has been so often asserted, this disease is much more frequent in the insane than in healthy persons, Fürstner would assign as the reason the greater liability of such persons to injury.

An unusual malformation of the hammer is described by Buck, the tip of the manubrium being bent forwards upon itself in the plane of the membrana tympani, so as to form a regular hook.

In an exhaustive article of 100 pages, Wendt gives the results of his dissections of one hundred and sixty-eight ears taken from persons who died of variola, vera and hæmorrhagica. The investigations were undertaken with the view of determining (1) the results of the disease on the ear, and in how far the ear-disease was the cause of other diseases; (2) the existence of the more minute tissue changes; (3) the anatomical cause of the functional disturbances observed during life; (4) to compare the appearances during life with the results of the dissection.

Heretofore, the difficulty of removing all the parts without disfiguring the body has been a serious obstacle, but Wendt proposes a new and simple method. After opening the head, a broad chisel is driven perpendicularly downwards, a short distance in front of the anterior edge of the body of the sphenoid (one and a half centimetres in front of a line drawn from the outer ends of the lesser wings). In this opening a narrow saw is inserted, and worked perpendicularly in a convex line through the lesser and greater sphenoid wings, the horizontal part of the temporal bone close to the vertical portion, then obliquely through the posterior part of the mastoid, and, finally, through the posterior end of the crista ossis petrosi. The remaining parts, to the anterior edge of the foramen magnum, are then broken through with a chisel, and the whole separated by the knife. The whole ear, with the entire Eustachian tube, is thus removed and the naso-pharyngeal cavity exposed.

The pathological changes found were some of them identical with the variolous disease, or closely related to it, while others were such as are found with other general or local diseases. Pustules were seen frequently on the auricle, occasionally in the cartilaginous, but never in the osseous meatus, while hyperæmia and swelling of the corium, serous infiltration of the epithelium, with swelling of the reté Malpighii, were not infrequent in the osseous portion of the passage. The same changes were found in the orifice and lower portion of the Eustachian tube which were seen in the nasal cavity, hyperæmia, hæmorrhage, diffuse swelling, with deposition of pus corpuscles, either between the epithelial cells or in distinct collections and ulcerations, only extending, however, through the epithelium. Purulent infiltration, with some thickening of the epithelium, was occasionally found in the middle ear.

The other changes, which are not of a specific character, but such as are found in many diseases, were, hyperæmia, diffuse and circumscribed hæmorrhage, swelling and abnormal secretion of the mucous membrane lining the middle ear. In the few cases in which the labyrinth was examined, marked hyperæmia was found in those cases where there was a general hyperæmia of the brain.

From the cases examined, both before and after death, Wendt concludes that hyperæmia of the mucous membrane of the middle ear has little or no influence on the hearing. The interference with the hearing-power from secretion in the tympanic cavity is variable, but not extreme, depending on the consistence of the fluid ; the swelling of the mucous membrane, however, from diminishing the normal mobility of the conducting apparatus, and from causing abnormal connections between its parts, may interfere very seriously with the functions of the ear, and the retrogressive metamorphoses of this swelling may result in a permanent diminution of the vibratory power of these parts.

The variolous processes proper, Wendt considers, heal without injurious effect on the ear, as he has never found stricture, contraction or obliteration in the tube as the result of that process. The other pathological processes, however, which are not characteristic of variola, may produce the same changes as result from catarrhal inflammations in many general diseases, and one of the most interesting results of his observations is the minute and accurate description of the condition of each part of the ear in these catarrhal inflammations.

(To be concluded.)

Bibliographical Notices.

Dental Caries and its Causes. An Investigation into the Influence of Fungi in the Destruction of the Teeth. By Drs. LEBER and ROTTENSTEIN. Translated by Thomas H. Chandler, D.M.D., Prof. of Mechanical Dentistry in the Dental School of Harvard University. With Illustrations. Philadelphia: Lindsay & Blakiston. 1873. Pp. 103.

As the authors state in their preface, this is not a monograph, but merely the detailed statement of the results of their special investigations, together with brief considerations of the views of other observers, so far as they are suggested by the subject matter. A brief résumé is given of the principal hypotheses which have been advanced, from time to time, to explain the origin, progress and nature of dental caries, chiefly the so-called chemical, vital and parasitic theories, and their various combinations.

In regard to the much-discussed subject of central caries, they remark: "Although, in most cases, the caries called central is so only in appearance, there are cases, very rare, it is true, where the destructive process has commenced in the dental pulp itself."

They confirm the prevalent view that caries is the result of the action of an acid upon the dental tissues, but differ from many in their interpretation of the phenomena presented by the disease. The idea of the protective power of the so-called "enamel cuticle" is shown to be untenable.

True caries extends from the exterior to the interior of the tooth, involving, primarily, the enamel or cement and subsequently the dentine. While they do not deny the possibility of a vital reaction on the part of the dentine against the carious process, they show that the arguments of Tomes, Neumann, Hertz and others are untenable. These are refuted by proving that artificially inserted human teeth, which have become carious within the mouth, and carious teeth, made of hippopotamus ivory, display the same microscopical appearances which were regarded by the above authors as evidence of a vital process in the dentine.

Admitting the agency of acids in the production of caries, the main object of the work is to show that a fungus, *leptothrix buccalis*, also, takes an *active* part in the process, a conclusion which has not been confirmed by later writers (vide Wedl's Pathology of the Teeth). They found that the fungus cannot penetrate enamel of normal consistency, and were unable to decide if it can penetrate sound dentine, accidentally denuded. When, however, these tissues have become less resistant, through the action of acids, then the elements of the fungus, they say, are enabled to penetrate them and to produce, by proliferation, especially in dentine, the effects of softening and destruction much more rapidly than would be the result of the action of acids alone. In the early stage of the process, when the surface of the tooth is still polished and intact, they were never able to prove the presence of the fungus; so that they concluded that at this period of the disease, constituting the so-called "dry caries," the effects are due solely to the action of acids. Their results were obtained by the application of a test, in the form of iodine and acids, whereby a beautiful violet color is produced.

In regard to the acid agents in the production of the disease, the authors ascribe the principal influence to the products of acetous fermentation of particles of food within the mouth. These acids, they say, act with much greater energy than those formed transiently by the alimentary débris, or by other substances introduced into the mouth. Admitting the fact that our knowledge is not yet sufficient to enable us to determine the exact nature of the acid or acids formed in the mouth, the authors express an opinion, coinciding with that of Oehl, in favor of lactic acid, the requisite conditions for the formation of this being fulfilled in the buccal cavity. While they do not attribute much value to the presence of Pasteur's lactic-acid ferment, or others, they state that if fungi take any part in the acid fermentation within the oral cavity, a point which remains to be proved, they are inclined to attribute it to leptothrix.

Quantitative and qualitative anomalies in the structure of the teeth, which may be combined or occur separately, are considered with reference to the fact that they favor the occurrence and promote the progress of caries.

In concluding, brief observations are made upon the subject of therapeusis. The objects to be attained are considered under the head of prophylaxis and filling. The former comprises measures which serve to neutralize the acids, when formed in the mouth, and to prevent fermentation and the development of fungi by a proper care for cleanliness. By means of filling, the penetration of air and liquids is hindered, and, consequently, fermentation and the development of fungi are rendered impossible.

The translation is an excellent one, and the more deserving of credit, as it is a "labor of love." A few well selected and admirable illustrations add considerably to the value of the book, which, in its general appearance, is very creditable to the publishers.

Now that dentistry is assuming a prominent position in medical science, it is hoped that the literature, in subjects appertaining to it, will rapidly be increased, if necessary, by judicious translations of foreign works such as the one we have considered. W. E. B.

Second Annual Report of the Dispensary for Skin Diseases of Philadelphia. Philadelphia: King and Baird. 1873. Pp. 15.

At this institution, the first in the country established for the treatment of skin diseases under the direction of an exclusivist in this branch of medicine, there had been treated, at the end of the first year, 425 patients. [A similar institution in New York records for its first year 313 patients, the Boston Dispensary for Skin Diseases, 823.] During the second year, 401 new patients have been treated.

Dr. Duhring, the very able physician in charge, says, justly, that, "to be a success, the institution must have acquired reputation and the confidence of the public, points rarely gained without a due amount of work, perseverance and time." He then alludes to the necessity for something more than dispensary treatment in many cases, and to the great need of a hospital devoted exclusively to these cases, and adds what is painfully true in Boston also, viz.: "Singular as the statement may seem, there is not a ward or bed among all the hospitals of Philadelphia (excepting the Almshouse) devoted to the treatment of skin disease—in fact, no institution where a poor man may apply and be sure of admission."

Of the whole number treated, 196 were males, 205 females; adults 336, children 65. Patients of American birth preponderated. Twenty-three different occupations are reported, besides "miscellaneous." The number of diseases observed in 1871 was 39; in 1872, 38. The diseases recorded do not vary in their nature from those observed in Boston, except that affections of the sebaceous glands seem to be more prevalent here than in Philadelphia. Medicines have often been bestowed gratis. Patients have, as a rule, been regular in attendance. The dispensary has also served as a school for both physicians and students.

The pamphlet contains, also, the By-laws, the names of officers and contributors, the Secretary's report and that of the Treasurer, which latter shows the monetary condition of the dispensary to be everything which could be desired.

The institution has our best wishes for and expectation of a continued and ever increasing success, which it will be sure not to lack under such directors as it possesses at present. E. W., JR.

BOOKS AND PAMPHLETS RECEIVED.

Family Thermometry; a Manual of Thermometry for Mothers, Nurses, Hospitals, &c., and all who have charge of the Sick and of the Young. By Edward Seguin, M.D. New York: G. P. Putnam & Sons. 1873. Pp. 72. (From the publishers.)

Leitfaden bei der Microskopischen Untersuchung Thierischer Gewebe. (A Guide for Microscopical Examination of Animal Tissues.) Von Dr. Sigmund Exner, Privat-Docenten für Physiologie und Assistenten am Physiologischen Institute zu Wien. Leipzig: Wilhelm Engelmann. 1873. Pp. 93.

Florida and South Carolina as Health Resorts. By Wm. W. Morland, M.D. Harv. Boston: James Campbell. 1873. Pp. 20. (From the author.)

The Treatment of Whooping Cough with Quinine. By B. F. Dawson, M.D. Pp. 14.

Biennial Report of the Officers of the Vermont Asylum for the Insane for the two years ending Aug. 1st, 1872. Pp. 14.

Contribution to the Diagnosis of Cancerous Diathesis—Carcinosi. By Wm. B. Neftel, M.D. New York. Pp. 5.

Structure of the Scalp of the Negro.—In a paper read before the Microscopical Society, Mr. Charles Stewart gives the result of his investigation upon the appearance presented by section of the scalp of the negro. Besides the dark color, which is due to the extra pigmentation of the deep layer of the epidermis, there are certain peculiarities that have not received general attention. The scalp is altogether thinner, and the hairs and follicles present the following differences from those of the European. In the first place, the portion of the hair and follicle imbedded in the skin is much longer, and is also remarkably curved, so that it commonly describes a half-circle. The papilla at the base of the follicle, consequently, either lies horizontally or even becomes directed obliquely inwards towards the subjacent bone. Lastly, the sebaceous gland is somewhat smaller.—*Lancet, Feb.* 15, 1873.

Boston Medical and Surgical Journal.

Boston: Thursday, April 3, 1873.

It was shown in a recent editorial that the contempt into which medical expert evidence has fallen is the fault, not of the profession, but of the community, the trouble arising by the putting of the ignorant and disreputable on a footing of equality with the best. Our attention is now called to a glaring abuse of a very different nature, but flourishing by similar causes. A book has lately appeared which treats in a popular and quackish manner, of generation, conception, the diseases of the generative organs, &c., but which differs from most others of the same class in being handsomely bound and printed, written in good English, and in expressing correct views on some points. These very merits, joined to a canting style, make it dangerous to the young, whose imagination it excites, and who are unable to detect its fallacies, though it is absolutely beneath criticism. It is a wolf in sheep's clothing. But it is not of the book nor of its author that we write, but of non-professional persons, many in respectable, some in prominent positions, who do not blush to recommend it. There are, at the beginning of the book, ten pages devoted to "puffs" from journals of all kinds (except medical, we are happy to say) and from letters, all of which, it is stated, are entirely unsolicited. Among the authors of these letters we find a well-known clergyman, of New York, who, though not giving his "unqualified praise," states that "the substance of the book is excellent, its purpose high, its counsel noble, its spirit earnest, humane and pure," and trusts "that it will have a very wide circulation." A prominent writer calls it a "brave book." The principal of a school has "more than read it," he has "studied . . . . . feasted upon it." "A wife and mother" and a female physician (?) write to assure the author that there is no doubt, whatever, about the blessings in store for him. A superintendent of schools expresses his admiration, and adds his good wishes.

Among the journals, a spiritualistic one is, of course, radiant; one in the "woman cause" is gushing, as might be expected; a religious one considers "the method and execution of the work quite unexceptionable." Other papers, of which more sense might be expected, praise it with more or less indiscretion. One has discovered that in it "the influence of Christianity is recognized, and made the basis of the reforms advocated;" another thinks its style "chaste and elegant," while a third calls it "a plain but chaste book," and so on "*usque ad* *nauseam.*" The country teems with men and women, many, unfortunately, in positions of trust, who do not hesitate to decide dogmatically on difficult questions of which they know nothing. The sum of all the opinions given is not worth the scrap of paper upon which the shortest of them is printed. We do not blame these people for their ignorance, but for their presumption, and would ask them if they have ever weighed the terrible responsibility they take upon themselves, or have sought advice from those capable of giving it to guide their thoughts upon such subjects. Particularly guilty are those in charge of parishes or schools who dare to send out this and similar books (whose name is legion) broadcast, with their endorsement, among those for whom they are accountable. We leave this painful subject with disgust and with discouragement, for the danger is great; but where are we to look for safety when public opinion is made by the ignorant in the interests of the corrupt?

QUARANTINE.—The *Med. Times and Gazette*, Feb. 15, 1873, in an article on this subject, states that the difficulties of enforcing a rigorous quarantine have increased and are increasing. The chief enemies that we have sought of late years to keep at bay by this means are cholera and yellow fever. Heretofore, the plan pursued has been to board suspicious ships, and to detain those persons in whom the disease prevailed.

It claims that nothing can be more clearly shown than that under ordinary circumstances, cholera tends to follow trade routes and other highways of human intercourse; e. g., that in India it follows the crowds from holy fairs. For some years, it has prevailed in Russia more or less constantly, and all this winter it has been smouldering in Hungary and Galicia.

Now what, it is asked, with rapid steamboat and railway travelling, is to prevent the introduction of the seeds of disorder among the English? An infected man makes his way to Ostend and thence passes over to Dover, or comes to London. There may be no cholera in Belgium, or near it; but even supposing there was, how, without almost arresting intercourse, could any useful quarantine be instituted in such a case?

It is stated that if, as far as cholera is concerned, the prospects are not altogether reassuring, yet the dangers regarding yellow fever are not similar, in England, owing to the distance any vessel has ordinarily to travel, in passing from the ports where yellow fever generally prevails to the English. Reference is made to a paper recently presented to the U. S. Senate, which claims that due inquiry establishes the possibility of restricting the spread of yellow fever by an efficient quarantine. Various outbreaks of yellow fever are mentioned, and the immunity from the disease of cities where a strict quarantine has been established at such times are cited.

The paper concludes as follows: "Is there any possibility of providing an efficient quarantine against cholera? We fear not; but at all events, every precaution should be taken to provide against its introduction when fully developed. We may not be quite in the position to treat a case of cholera altogether satisfactorily, but it seems feasible to prevent its introduction and to check its spread; nay, we question if it is beyond our powers to quench an outbreak. But prevention is better than cure."

LAWS OF ERUPTIVE AND CONTAGIOUS DISEASES.—We quote the following from the *Medical Times and Gazette* of February 22d. It is taken from a notice of M. Besnier's quarterly report of the prevalent diseases of Paris.

"Nothing is more remarkable than the extraordinary diminution in the number of these during the quarter (ending Jan. 1, 1873); and it is absolutely unprecedented that *not a single death from smallpox* has taken place in any of the hospitals. 'The eruptive fevers in general, and variola in particular, have, then, lost temporarily almost all their power of contagious diffusion—they have ceased to be epidemic, in the medical sense of the word; and we seize in the very fact the flagrant difference which separates an epidemic and a sporadic disease, a difference exhibited in the fecundity of the one and the sterility of the other. All epidemic diseases transmissible from a sick to a healthy man are subjected to this common law of the variability of contagious faculty—a variability that is exercised within extremely wide limits, sometimes undergoing slight oscillations, and at others sudden deviations, which put an end to the epidemic period, or produce epidemic explosions, properly so called. Of the cause of such variations we are completely ignorant.' Smallpox, for example, is not only rare, but it does not create around it now that contagious atmosphere observed during epidemics, although all the known conditions are just what they always have been. Never have fewer precautions been taken, and never have there been less vaccinations and re-vaccinations; and for a long time there has been a constant current of immigration. It is not that the disease is less severe in its nature, for although during 1872 the number of cases has been extraordinarily small, the relative mortality has exceeded that of the mean of the most epidemic years. It is an error which is often taught, that sporadic diseases are always less fatal than epidemic; but on exact inquiry we find that sporadic cases of cholera or typhoid fever are just as fatal as those of an epidemic form. With respect to smallpox, also, the mean mortality for eight consecutive years (1862–69) was 12·28 per cent., while in the two years in which it was epidemic (1868–69) this was but 11·77 per cent. For a long time scarlatina has not prevailed epidemically in Paris, but its malignant character has not disappeared."

THE USE OF LYMPH TAKEN FROM RE-VACCINATIONS *(Berliner Klin. Wochenschrift*, Aug. 26, 1872).—Dr. Dawosky, of Celle, denounces the practice (which is understood to prevail to a limited extent in this city) of vaccinating children with lymph taken from the vesicles of re-vaccinated persons. His chief objection is that experience has not yet shown how great protection is afforded from this kind of lymph. He cites, in conclusion, an official notification issued at Küneburg, in the year 1843, warning public vaccinators against the use of lymph derived from this source.

Medical Miscellany.

Our readers are reminded of Dr. Séquard's lecture, at the Natural History Rooms, on Saturday evening.

Dr. Billroth has received the decoration of the second class of the Russian order of St. Anne.

Dr. Rokitansky has been elected a member of the Anatomical Society of Paris.

The Minister of the Interior of France has placed at the disposal of the French Academy, the sum of 2000 fr. to reward the best works relating to the hygiene of infancy.

The cholera is dying out in Russia. According to the official statements of the week ending February 21, there were only thirty-five cholera patients left at Moscow and in the Governments of Grodno, Piotrkow and Plock.

The Emperor of Russia has authorized, by public decree, the formation of committees to aid in raising a worthy memorial to the memory of Albert v. Graefe in Berlin.

Dr. James Young, at a recent meeting of the Obstetrical Society of Edinburgh, reported the strange case of a lady who had had four children, but who never had any milk in her left breast, although to all appearances it was perfectly normal and healthy. She has three sisters who all have had families—one eight, one six, and the third four children; but none of them have had any milk in their left breast.

Transfusion of Milk in Cholera.—Mr. Edward M. Hodder, of Toronto, gives the details of three instances in which milk was transfused into the veins of patients in the latter stages of Asiatic cholera. The first case was that of a man who was in a state of collapse, being cold, pulseless, blue and shrivelled. The effect is described as magical. The man rallied almost immediately, and made a rapid recovery. The second case was that of a woman, an habitual drunkard, and the history of the transfusion and its effects are almost identical with that of the previous patient. The third case is very imperfectly described, but we are led to conclude that the patient, a man who was admitted suffering from the same disease, and almost *in articulo mortis*, rallied for a time after the transfusion, but the operation not having been seasonably repeated, the man succumbed.—*The Practitioner*, February, 1873.

A new Anodyne Colloid.—Dr. Lackerstein proposes the following composition in the case of neuralgic and other localized pains:—

℞. Amyl hydrid., ℥i.;
Collodion (B.P.), ʒi.;
Aconitiæ, gr. i.;
Veratriæ, g. vi. M.

This forms a colloid, which should be brushed over the painful part five or six times, forming successive films. If the pain be not at once relieved, the absorption of the alkaloids may be favored by covering the colloid film with a layer of spongio-piline.—*The Practitioner*, January, 1873.

The Use of Dry-powdered Blood.—Warm blood, taken from the calf or ox, has long been employed in certain parts of Europe, being administered in the early stages of tuberculosis, in chlorosis, and in general debility with anæmia. To overcome the very great repugnance so often manifested for this drink, Dr. De Pascale, of Nice, is in the habit of giving it in the form of powder, in which condition it is nearly tasteless. The blood is dried by means of the water-bath, powdered, and grated through a sieve. The dose is about thirty grains.

Abuse of the Peabody Trust.—"Experience has amply proved that the Peabody Trust has been much abused. We have made some special inquiries with respect to the social position of the recipients of this so-called charity. We find that, notwithstanding the rule which is supposed to exclude all in the receipt of wages exceeding a pound a week, a large proportion of the tenements are let to people of a better class. It is no uncommon thing to find a piano in their rooms. There is also the incontrovertible fact that private companies have provided equally good accommodations for the public on the same terms."—*Med. Times and Gazette*, March 15, 1873.

We copied in our last an extract from the *British Medical Journal* on obscene literature, and are glad to see that a right step in this direction has also been taken by Congress. The following extract is taken from the editorial columns of the *Philadelphia Medical Times*: Every good citizen of the United States, and in fact every friend of purity and good morals everywhere, will hear with pleasure that a bill "to prevent the mailing of obscene books, papers, articles and advertisements,"—we quote from one of the daily papers—has passed both Houses of Congress and received the President's signature. Faithfully executed, such a law will be an incalculable benefit to the nation.

Age and Intellect.—That extreme longevity does not abridge intellectual activity, is well evidenced by the following table of the dates of birth and respective ages of the highest talent of the French Academy:—

MM. Guizot	1787—85 years.
Thiers	1797—75 "
Remusat	1797—75 "
Saint-Marc Girardin	1801—71 "
Victor Hugo	1802—70 "
Dupanloup	1802—70 "
Legouvé	1807—65 "

NOTES AND QUERIES.

Problem for Homœopaths.—If one globule of pulsatilla (thirtieth potency) will turn a malplaced *fœtus in utero*, how many such globules will be required to turn our efficient Surgeon-General out of office? Psora.

To C.O.D., M.D., Hull.—You have been misinformed. We should not advise the internal administration of *curacoa* in the case of varicose ulcers.

Mortality in Massachusetts.—*Deaths in thirteen Cities and Towns for the week ending March* 22, 1873.

Boston, 178—Worcester, 19—Lowell, 15—Milford, 2—Chelsea, 13—Salem, 10—Lawrence, 12—Lynn, 19—Fitchburg, 6—Newburyport, 5—Somerville, 7—Fall River, 27—Haverhill, 5. Total, 318.

Prevalent Diseases.—Consumption, 53—pneumonia, 42—scarlet fever, 19.

Seven deaths from smallpox are reported:—Six in Boston, and one in Chelsea. Of the deaths from scarlet fever, sixteen were in Boston.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, March 29th, 146. Males, 79; females, 67. Accident, 2—abscess, 1—apoplexy, 2—anæmia, 1—asthma, 1—inflammation of the bowels, 2—disease of the bladder, 1—bronchitis, 3—inflammation of the brain, 2—disease of the brain, 5—cyanosis, 2—cancer, 2—cholera infantum, 1—consumption, 35—convulsions, 5—cerebro-spinal meningitis, 16—debility, 4—dropsy, 1—dropsyof the brain, 2—diphtheria, 2—eczema, 1—erysipelas, 1—scarlet fever, 2—typhoid fever, 2—gastritis, 1—disease of the heart, 4—disease of the hip, 1—homicide, 1—intemperance, 3—disease of the kidneys, 3—congestion of the lungs, 3—inflammation of the lungs, 7—marasmus, 5—old age, 4—paralysis, 2—pleurisy, 1—pyæmia, 1—puerperal disease, 3—smallpox, 4—synovitis, 1—teething, 1—whooping cough, 1—unknown, 3.

Under 5 years of age, 44—between 5 and 20 years, 23—between 20 and 40 years, 44—between 40 and 60 years, 23—over 60 years, 12. Born in the United States, 101—Ireland, 31—other places, 14.

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Original Communications.

PARALYSIS IN INFANTS.

By S. G. Webber, M.D.

Read before the Boston Society for Medical Observation.

(Concluded from page 342.)

The symptoms which are most important in assisting to form an early diagnosis in caries of the vertebræ are, disturbance of sensation, some anæsthesia; pain referred to the periphery; feelings of irritation, as itching, tingling, smarting, &c., in the side or in front, sometimes leading to constant scratching. Motor disturbance coming on gradually, the paralysis is rarely, if ever, sudden in its onset; there are generally no convulsions, though there may be startings and twitching of the limbs, especially during sleep. Electro-muscular contractility is retained; atrophy and contractions generally set in only after the disease has existed for a long time, and when the diagnosis is clear.

Several cases of infantile paralysis have been carefully examined after death, and disease of the cord has been recognized. In most of these, the patient lived many years after the beginning of the paralysis. From this fact it might be doubted whether the changes found were the cause or the effect of the loss of motion.

In infantile paralysis, cerebral symptoms are wanting, as a rule; motion alone is affected. For such a result the lesion must be either peripheral in the muscles, or in the endings of the nerves, or in the anterior roots or in the motor portion of the cord or brain. The brain is excluded by all absence of cerebral symptoms. The generalization of the paralysis and the suddenness of the attack in the beginning would also exclude the peripheral origin and its origin in the anterior roots. The motor portions of the cord are the only parts, then, in which the lesion can be seated, i. e., the anterior cornua, the anterior and lateral columns. As the faradaic contractility of the muscles is soon lost, the lesion must be near the level at which the nerves supplying those muscles enter the cord. As there is early atrophy, said by most observers to be due to fatty degeneration of the muscular fibres, the central grey substance must be the part affected, and the central portion of the anterior cornua is probably the exact spot of the lesion.

In those cases which have been examined after death, the anterior cornua have been found more or less changed, there being a destruction of the nerve cells and atrophy, with an increase of the fibrous network in old cases. When the patient has lived many years after the attack occurred, it is not possible from the nature of the changes found to decide in regard to the nature of the lesion at the beginning.

In an article by Charcot and Joffroy *(Arch. de Physiol. Norm. et Path.*, 1870), the lesion is supposed to be in the nerve cells of the anterior cornua. Perhaps I ought to quote the opinion, as expressed by them.

"But what are the elements in the anterior cornua which are first attacked? Is it the neuroglia or the motor cells? The second hypothesis seems to us the more likely. Wherefore, indeed, this remarkable localization of the anterior cornua if the neuroglia is first affected? Is it not more probable that the motor nerve cells, special organs, endowed with specific properties, have been the first seat of the disease? One fact, also, may be mentioned in support of this view; in certain regions of the cord the disappearance of a certain number, of an entire group, or even several groups of these cells is, with the consequent atrophy of the anterior roots, the only alteration which can be discovered histologically."

We know very little in regard to the nature of the nerve cells of the cord, or about the diseases to which they may be exposed. And, while it may be possible that the cells throughout a certain length of the cord should be so affected as to cause sudden paralysis, a portion of the cells afterwards to be restored to health, and the rest to be totally destroyed, yet I am not inclined to admit this view.

A congestion of a large part of the cord might produce a paralysis corresponding to the extent of the cord affected. As this was relieved, the paralysis would disappear. Any portion of the cord more seriously affected would show the effects of the disturbance longer, and if the nerve cells of any part should be destroyed, the paralysis would be permanent.

On comparing the cord of an infant with that of an adult, the larger number of nuclear and cellular elements in the former will lead to the conclusion that a congestion which would pass away and leave no permanent effects in an adult, might easily cause an amount of change in an infant's cord from which recovery would be impossible.

I would, then, refer the earlier symptoms to congestion, possibly to a hæmorrhage in some cases. Perhaps, in the first case reported, a slight hæmorrhage was the cause of the child's screaming at night. Dr. Hammond has seen one case where, at the autopsy, was found a cicatrix partially filled with a very small clot. *(Diseases of the Nervous System*, p. 692.)

A case reported by Parrot and Joffroy *(Archives de Physiologie Normale et Path.*, 1870, p. 309) is confirmatory of the view here taken, though the authors do not so consider it. The child died, at the age of three years, from measles. The arteries of the grey matter had undergone an inflammatory change, and in the lymphatic sheaths were crystals of hæmatoidine and masses of nuclear elements of new formation. These changes were not limited to the parts from which the nerve cells had disappeared, nor were they found in all points where that change had occurred. For these reasons the authors do not consider them primary, but think the destruction of the nerve cells was primary.

The changes in the bloodvessels were such as required time, and were probably secondary, as was also the destruction of the nerve cells. This case would rather tend to prove that both these lesions are due to a congestion, and, possibly, a slight inflammation of the grey substance, by which the vessels and the nerve cells were affected, though not equally so. The relief of the congestion allows those cells which are not seriously injured to recover their function, and motor power is partially regained; other cells are too severely affected to recover, and, in the muscles in relation with such, the paralysis becomes permanent.*

In the second class of cases, the symptoms point especially to a cerebral origin; the convulsions, the loss of consciousness, the subsequent hemiplegia, which in the fourth case affected the face as well as the arm and leg, the contractions, which occurred in two out of three cases, and the epileptic attacks, which were subsequently developed in all three cases—these point to a cerebral origin.

Of the nature of the lesion, there may well be differences of opinion. Dr. Hammond gives a good description of the affection, and refers such cases to diffused cerebral sclerosis. This may be the lesion found years after the beginning of the affection. I have examined one brain where the changes were of that description, and, from the imperfect account of the symptoms received, should refer the case to this class.†

Meigs and Pepper mention a case almost exactly like one of the above, and consider the symptoms due to cerebral hæmorrhage. I am rather more inclined to consider the lesion meningeal, congestive, or inflammatory. If there is ever hæmorrhage, it must be very slight. The changes in the cerebral substance would be secondary, and when the immature nature of an infant's brain is considered, the more serious results of irritation and congestion are easily explained, as in the spinal cord. This is in harmony with the fact that apparently serious lesions of healthy infants' brains are repaired, which, in adults, might leave lasting defects. In one case, a continuance of the disturbing cause interferes with the natural development of the nuclear elements. In the other, the fact that the elements are not yet fully formed, favors the restoration from temporary and fugitive disturbances. The long continuance of the convulsions, in one case increasing in intensity until consciousness was lost, this occuring after a hot day, would favor the supposition that the lesion is congestion rather than hæmorrhage.

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* Since this was written, I have seen a brief summary of conclusions reached by Damaschino from the examination of three cases. He considers the paralysis due to a lesion of the cord, affecting the anterior portion, and of a hyperæmic and inflammatory nature.—(*All. Med. Cent. Zeit.*, 1872, 93.)

† T. Simon reports a case of convulsions, at 2 years of age, followed by epilepsy, in which sclerosis of the brain was found after death.—(*Berl. Klin. Wochensch.*, 1873, 4 & 5.)

West, in his admirable little book on the *Disorders of the Nervous System in Childhood*, has, perhaps, referred to such cases where epilepsy occurs years after attacks of convulsions followed by paralysis.

The lesions found in paralysis due to caries of vertebræ are, thickening of the spinal dura mater, causing compression of the nerves, spinal meningitis or myelitis. These may exist independently of any curvature of the spinal column. There may also be sclerosis of the white columns as a secondary change.

One word in regard to diagnosis. For infantile paralysis may be mistaken the paralysis found in idiocy, reflex paralysis due to constipation or other causes, and so-called rheumatic paralysis, from the action of cold on a circumscribed part of the body; also, the paralysis which sometimes follows as a sequel of acute febrile diseases or diphtheria. The paralysis which occurs in hydrocephalus is less likely to be mistaken.

I ought, perhaps, to say a few words in regard to prognosis and treatment. Briefly, then:—infantile paralysis, neglected or improperly treated, ends in entire loss of power and atrophy of one or more muscles, with subsequent deformity. The faradaic current is not able to restore function. Even while it is used, the muscles may lose their power of responding to its stimulus. The interrupted galvanic current is the best treatment; but to be of use it must be employed early. Wait to see how much improvement will be gained by nature, and the precious opportunity slips by, and it is too late to do much. Use electricity early, and much may be done. Injection of a concentrated solution of strychnia into the affected muscles has been found of great benefit. (See *Lancet*, July 6, 1872.)

In paralysis of cerebral origin, the prognosis is less favorable. If the lesion is so severe that nature cannot restore function, only a little can be gained in addition by faradizing the paralyzed muscles. When contraction has occurred, the galvanic current may cause relaxation; but it is questionable, in my mind, whether any permanent benefit can be obtained.

In caries of the vertebræ, it is necessary to keep the diseased bone immovable until the disease is cured. The apparatus described by Dr. Tarbell, in his paper lately read before this Society, seems well adapted for this purpose. If there is any paralysis remaining, it may be treated by electricity.

LABOR COMPLICATED BY VARIX OF THE VULVA, AND BY UNUSUAL SIZE OF THE CHILD.

By CHALES W. PARSONS, M.D., Providence, R. I.

THE wife of a machinist, born in England, had had, previously, two living children, and one miscarriage. She was rather a tall and slender woman, much troubled with varicose veins in the legs, and, during pregnancy, in the vulva also, aggravated by her unavoidable household cares. She missed her menstrual period on May 29th, 1872, and it proved that she was pregnant. During her pregnancy, the varices became larger than ever before, the right labium being occupied by a large one covered by skin, and another hanging, to use her own expression, "like a bunch of grapes," near the urethra, and covered by mucous membrane.

On the morning of February 12th, I was called to her. She had been quite weak for some time, had not been able keep up and do her work, and the varices of the vulva were smaller. She had slept till near four in the morning. At six, the pains were rather severe, not more than five or ten minutes between; the waters had escaped about fifteen minutes before. On examination, the os uteri was found completely dilated; head above upper strait; posterior fontanelle to the left side. The vulva was tumid with varices. Between eight and nine, finding the head did not engage itself in the pelvis, I prepared to apply forceps. On passing a silver catheter, it caused a very free flow of blood through and alongside of the instrument, and did not enter the bladder. Between nine and ten, I applied the forceps, without having evacuated the bladder, as it is my rule to do. She had passed water about three hours before. By hard traction, aided by strong pains, the head was brought down into the pelvis, being felt to slip by the upper strait; when it came to press on the perineum during pains, the instrument was removed. On the vaginal walls, round blue varices were seen; one was in shape and size like the small end of a hen's egg. At first pushed down before the head, they were flattened as it passed. The top of the head passed the perineum, without unusual delay, about a quarter of eleven. The head was then found to be extraordinarily large; after the whole top had emerged, the forehead was several minutes distending the perineum; the cheeks were very full and dusky blue; no pulsation at the fontanelle. After the head was delivered, and funis found not to be around the neck, several pains, and I should think fifteen minutes elapsed, before the shoulders were delivered. The reason for this will appear hereafter. After several efforts, I got a tape under the left armpit, which aided in delivering that arm. After the shoulders, the hips were also delayed in passing. The perineum was distensible, and escaped laceration. No pulsation was felt in the funis, nor at the heart, nor was there a single gasp. Means of resuscitation failed.

The child was a male. It weighed, by steelyards warranted accurate, and which weighs down to single ounces, seventeen pounds and two ounces with the clothes on. These were only a short flannel shirt, binder and slip; it was weighed in a light calico apron. The child measured in length a fraction of an inch over two feet; width, from the point of one shoulder to that of the other, in front, eight inches; circumference of head, around forehead and vertex, sixteen inches.

That night the mother had a good deal of restlessness and fever; pulse 108 to 116; abdomen much distended and painful; with moderate after-pains. She passed water several times the next day, mixed with blood. Toward evening of the next day (Feb. 13th), she was more comfortable, moved easier, turned on her back, but the abdomen was still much distended and tender on pressure. No nausea. She was treated with opiates, sinapisms, liquid food.

Feb. 14th, 9, A.M.—Has had a good night; slept much, taking but one Dover's powder; abdomen less tender, still distended. Pulse 108. Has relished toast and coffee. 3, P.M.—Feels better; pulse 120.

From that time she steadily improved, except that, from February 16th, for a few days there was a distention of the breasts, and the pulse, on the 16th and 17th, ran up to 120, having been 100 on the 15th. She ate beefsteak on the 17th, and the following day had the bowels moved by castor oil.

Eleven days after the birth, she walked about the room. The varices have mostly disappeared.

COURAGEOUS AND SERVICEABLE SCEPTICISM.—Prof. E. S. Dunster, M.D., in his annual address before the New York Academy of Medicine, Dec. 30, 1872, says: "The diminishing belief in specifics is more apparent as we come down from the limited professional knowledge of the past to the greater of our own time, a belief everywhere, it may be said, in proportion to the ignorance of the people; and, accordingly, with the best informed physicians of to-day, the question is not what drugs shall be prescribed, but shall there be any treatment beyond rest and an appropriate regimen; and if his knowledge tells him that these last are sufficient for the case in hand, the physician courageously withholds all medication; and now, when some ill-informed person flings back that ugly word scepticism to indicate his estimate of what, with a show of learning, he will probably style, in the well-worn phrase of Asclepiades, 'a meditation upon death,' the reply is ready—that a knowledge which can dictate such a management of a case has in it not a single element of doubt, and is, therefore, as far as possible removed from scepticism. It is vastly more positive and more serviceable than mere faith in the efficacy of drugs without knowledge, 'which, in medicine,' says Sir William Jenner, 'is the worst form of scepticism, inasmuch as it is doubt of truth and belief in error—doubt which may prevent the saving of life, and belief which, embodied in practice, may kill.'"

Progress in Medicine.

REPORT ON OTOLOGY.

By J. Orne Green, M.D.

[Concluded from p. 352.]

Pathology and Therapeutics Continued.

Politzer.—Ueber Traumatische Trommelfellrupturen mit besonderer Rücksicht auf die forensische Praxis. Wiener Med. Wochenschr. 1872.

Blake.—Perception of high musical Notes. Transactions of Amer. Otological Society. 1872.

Gruber.—Zur Entfernung fremder Körper. Allg. Wiener Med. Zeitung. 1872.

Jacoby.—Behandlungresultate bei complizirten Otorrhœen. Archiv f. Ohrenheilk., vol. vi.

Schultze.—Ein Beitrag zur Technik des Nasen-douche. Idem.

Lucæ.—Ueber locale Anwendung des Chloral Hydrats. Berliner Klin. Wochenschr. 1872.

Weber.—Krankheiten der Muskeln. Berliner Klin. Wochenschr., No. 32, 1872.

Böttcher.—Veränderungen der Netzhaut und des Labyrinthes bei Fibro-sarcoma des Nerv. Acust. Archiv f. Oph. and Otol.

Böke.—Caries des Felsenbeines. Archiv f. Ohrenheilk., 1872.

Volkman.—Caries des Processus Mastoideus. Habilitations-schrift von Dr. Schele. Halle. 1872.

Politzer gives the results of his experience in accidental ruptures of the membrana tympani, more especially in those caused by a blow on the ear, calling attention to the importance of these cases in medicolegal medicine and the little that is said on the subject in forensic works. The early examination of the membrane is of the greatest importance, as the appearance of the opening is so characteristic that it can be determined from that alone whether the opening is the result of injury or of disease. Ruptures from injury have been generally described as a simple tearing of the membrane on the posterior segment, parallel with the manubrium, the edges lying in contact and only separating when air was forced through. Politzer, however, considers that such a condition is the exception, for in most of his cases there was a wide opening, owing to the retraction of the fibres. The position of the rupture was more frequent on the posterior and lower than on the anterior half of the membrane, and usually midway between the hammer and tendinous ring; its form, either round or oval. The remainder of the membrane, with the exception of a slight congestion along the hammer, is normal. The resulting deafness is variable; most marked when the labyrinth has also suffered from the concussion.

Where the membrane alone has suffered, the deafness is slight, the watch and voice are heard fairly, the tuning-fork on the head is heard only in the injured ear and subjective noises are wanting. It sometimes happens that the force of the blow is expended on the labyrinth without injuring the membrana tympani, and in these cases, which are much more unfavorable, there is a great degree of deafness, violent subjective noises, and the tuning-fork is heard in the uninjured ear. Occasionally, rupture of the membrane is combined with concussion of the labyrinth.

One characteristic of a rupture from injury, as distinguished from one from disease, is the perforation whistle when air is blown through. In a traumatic rupture, the air passes through with a broad, deep sound, but in a pathological perforation with a sharp whistling; the force necessary to produce the sound is also much less in the former than in the latter case. The course of the injury, where the labyrinth is unaffected, is generally favorable, the opening closing without marked inflammatory reaction, as Politzer says, generally by a growth from the inner layer of the membrane first. Some days after the injury, a greyish-yellow membrane is seen to be "pushed over" the rupture from the inside, and, after this membrane has entirely closed the opening, the torn edges of the cutis can still be seen for several weeks. A suppurative inflammation of the membrana tympani or middle ear is occasionally seen after a traumatic rupture, but is, according to Politzer, usually the result of an irritating treatment, such as instillations. The restoration in these cases is often perfect, but occasionally the inflammation becomes chronic, and a permanent opening, with greater or less deafness, remains.

In the majority of ruptured membranes, the functions of the ear are completely restored. Where changes have taken place in the middle ear as the result of suppuration, or where the labyrinth has suffered from severe concussion, deafness of variable degree may remain. In concussion of the labyrinth, the hearing may be restored, even after weeks, but more frequently some disturbances of the ear remain for life.

The treatment of these ruptures is simple: local applications and syringing are to be avoided; the exposed mucous membrane of the tympanum should be protected by excluding the air. In concussion of the labyrinth, Politzer claims to have improved the hearing by the constant electric current.

In a legal point of view, it is all important that an examination of the affected ear should take place within a few days of the injury, for after that time, as cicatrization may have taken place, it may be impossible to say whether rupture had existed or whether any existing deafness is due to the injury. A suppurative inflammation from an injury cannot be distinguished from a primary suppuration.

The degree of injury to the ear may be regarded as slight when the labyrinth has escaped concussion and when the rupture heals so that the hearing is perfectly restored; as severe when the labyrinth has suffered, and when, after cicatrization has taken place, repeated examinations during several months still show some disturbance of function. The injury may also be called severe when suppuration has supervened and permanent changes in the middle ear, such as adhesions, have resulted therefrom. An observation of, at least, three months, may, in some cases, be necessary before testimony could be given in regard to the permanency of pathological changes, as the ear may require that time to recover from a concussion of the labyrinth.

Concussion of the labyrinth without injury to the membrana tympani gives no objective appearances, and it is impossible, from the examination, to decide whether an injury is the cause of the existing disease in the ear.

The investigations of Blake are of interest, both from a physiological and pathological point of view. They were undertaken with a series of König's steel rods, and carefully carried out. From them it would seem that the perception of high musical notes depends on the conducting rather than the perceptive apparatus of the ear, and varies, diminishing with increasing age or with thickening of the mucous membrane of the tympanum, but increasing with increased tension of the membrana tympani. In perforations of the membrane, the perception for high notes increased, but varied somewhat according to the size and seat of the opening, and the tension of the conducting apparatus, being greatest where the perforation was on the posterior part of the membrane and of large size. A number of cases where it was necessary to make an artificial opening in the membranes were used for testing the truth of the observations, with the result of an improved perception for the notes, after the operation, the increase in one case being from 35,000 to 80,000 vibrations. In most cases of chronic catarrhal inflammation of the middle ear, the limit of perception was 35,000 vibrations, but it occasionally reached 40,000 and 50,000; in these latter cases, however, the membrana tympani was much drawn inwards and consequently very tense. Two cases of voluntary contraction of the tensor tympani muscle showed clearly the improved perception from increased tension of the membrane, the hearing for high notes increasing in one case by 5000, in the other by 10,000 vibrations, during the contraction of the muscle.

Gruber was led, from the difficulty which he experienced in removing a bean from the ear, to experiment on the possibility of causing such swollen vegetable substances to shrivel up so that they could be more easily removed. After trying a large number of solutions, the only effectual ones for this purpose were found to be sulphate of zinc (0.2 to 30) and lime water (10 to 30). In the case in which a bean had been impacted and become so swollen that it could not be removed, he was, by means of an instillation of sulphate of zinc, enabled so to reduce its size that removal was very easy.

Jacoby publishes a series of fifteen cases of otorrhœa, treated by means of galvano-caustic, in addition to the four already published by him; all of them were complicated by polypoid granulations, or by polypi, and the results of the treatment were very favorable, although he fails to show that the same results could not have been obtained by other caustics.

For the purpose of more thoroughly cleansing the posterior nares than is possible by the common form of the nasal douche, Schultze uses a metallic tube, resembling an Eustachian catheter, closed at the end and with numerous perforations. This being attached to a common douche, it is possible, by turning the instrument, to shower any part of the cavity desired.

In cases of so-called chronic dry catarrh of the tympanum, in which no marked changes in the curvature of the membrana tympani were visible, Lucæ has used, with good effect, injections of chloral hydrate (1.0 to 30.0). A few drops of the fluid were injected through the catheter every third or fourth day, and in those cases where the treatment was of avail an improvement was noticed after the second or third injection. The action of the medicine is that of an irritant, and the reaction from the injection may be quite severe, but is of short duration.

In eleven per cent. of his cases, there was a very marked improvement of the hearing, and in twenty-five per cent. a slight improvement. The results gained by the use of this solution he has found to be more permanent than those obtained by other means.

Weber considers that in many of the hitherto incurable forms of chronic catarrh of the middle ear, the primary trouble is a disease of the muscles of the Eustachian tube and middle ear. The cases are those of gradually progressive deafness, associated frequently, but not necessarily, with a catarrhal inflammation of the naso-pharyngeal mucous membrane; beginning on one side, most frequently on the left, with subjective noises, but without other symptoms, and going on to almost complete loss of hearing. He thinks that, as far as the membrana tympani and chain of ossicles are concerned, it depends chiefly on those muscles which bring the parts in contact with the labyrinth whether we hear well or not, and whether the labyrinth is pressed upon abnormally. It is also well known that the palatine and tubal muscles serve to ventilate the tympanum, and that the tensor tympani muscle is in close relation with the tensor veli palati. If, then, the tubal muscles are diseased, especially the tensor veli, he considers that the tympanic muscle also suffers, and the whole mechanism of the acoustic apparatus is affected.

The disease of the muscles consists in a weakness or complete paralysis, or else in a spasmodic contraction, and may be caused either by general disease, such as chlorosis, anæmia, hysteria, or by local hyperæmia or inflammation set up from the inflammation of the mucous membrane.

The treatment which Weber claims to have used with marked effect, is, first, to remove the inflammation of the naso-pharyngeal mucous membrane, and then to treat the disease of the muscles by electricity. For this purpose he considers it necessary to apply both the constant and the induced current along the course of the muscles. This he does by inserting one electrode directly in the Eustachian tube by means of an elastic rubber catheter, and the other in the pharynx, uvula, side of the neck, or vertebral column. The electric current requires to be used with care, and not applied frequently or strong enough to produce much irritation. One of the first effects is a complete cessation of the noises for a short time, and then for longer and longer intervals. The earlier this treatment is used, the better and quicker is the result.

These views of Weber's on the pathology of this disease are based on a number of dissections published by him in the *Monatschr. f. Ohrenheilk.*, in which the only disease found was a fatty degeneration of the muscles of the tympanum.

In a case of fibro-sarcoma of the brain with consecutive blindness, deafness, perverted taste and other functional disturbances, Böttcher found that the tumor extended to the labyrinth through the porus acusticus internus. The acoustic and facial nerves retained their outward form, but the nerve-sheath was imperfect, being broken irregularly into scales. All the canals of the modiolus, through which the nerves normally pass, were filled with a nucleated connective tissue and a large number of bloodvessels, and around the vessels was much brown pigment enclosed in caudate cells. No signs of any nerve elements could be found in the whole modiolus, and the lamellæ of the lamina spiralis ossea were filled with a transparent nucleated connective tissue. The inner and outer hair-cells were atrophied, but the other portions of the cochlea remained intact. The nerve fibres of the vestibule could not be found, and there was a marked atrophy of the ganglion geniculi of the facial nerve.

At the Naturforscher-Versammlung, Böke showed a number of interesting and new preparations of caries of the petrous bone. In one, the tympanum and external meatus were converted into one large carious cavity, the roof of the tympanum was largely destroyed, the fossa sigmoidea and incisura mastoidea were perforated, and yet the external lamella of the mastoid process remained intact. The patient had had an otorrhœa for years, and finally died with the symptoms of tuberculosis of the lungs. A paralysis of the facial nerve appeared a few weeks before death. The autopsy revealed an abscess of the middle lobe of the brain on the same side as the ear disease. In a second preparation, the fossa sigmoidea was perforated; other parts were free from caries. The otorrhœa was of two years' duration; brain symptoms showed themselves six days before death, and the autopsy revealed an abscess of the brain, which communicated with the ventricle on the same side as the ear disease. A third preparation showed cicatrices on the membrana tympani and the mastoid cells, filled up with a compact, newly-formed mass of bone, the result of a long-continued otitis media. Several cases were related of otitis media without caries, in which death occurred from abscess of the brain.

The result of Böke's observations is that in long-continued otorrhœa it is impossible to determine with what deep changes we have to deal; in many cases the external ear shows no disease, when the bone and even the brain may be already affected.

In caries of the petrous bone, the symptoms during life are by no means proportional to the anatomical changes found, and a precise method of treatment cannot be given. Böke has found that in most cases astringents and caustics increase the acute symptoms and do not diminish the otorrhœa. He advises merely the removal of the discharge by warm water injections; polypoid growths should be removed with the greatest care, as frequently carious bone lies behind them, which may cause serious trouble. Abscesses over the mastoid should be opened, and if the bone is found softened and carious it should be removed; he does not approve, however, of trephining the healthy bone.

In five cases in which the mastoid process was found to be either distinctly carious or much softened, Volkmann laid bare the bone, and the carious portions were scraped out with a sharp spoon. In from three to ten weeks, cure of the caries resulted in all the cases. In one case, it was necessary to repeat the operation once.

Breath of Diabetic Patients (*Gazette Hebd.*, July 19, 1872).—M. Guéneau de Mussy, who for several years has devoted especial attention to the study of diabetes, affirms that the breath of individuals affected with this disease very often emits a characteristic sour odor, not unlike that of alcohol, resembling very closly the breath of confirmed drunkards. In several instances, this odor was so powerful as to give at once a clue to a correct diagnosis. He has observed, moreover, that the intensity of this odor diminishes as the amount of sugar in the urine decreases.

Reports of Medical Societies.

BERKSHIRE DISTRICT MEDICAL SOCIETY. J. F. A. ADAMS, M.D., PITTSFIELD, SECRETARY.

Dr. Paddock, of Pittsfield, reported the following cases:—

Pneumonia after Measles.—The patient was a boy of 14, who sat up on the fifth day after measles, and had a chill in the evening, with pain in the right side, and dyspnœa. When seen by Dr. Paddock, on the following day, the respiration was 50; pain very severe; scarcely any expectoration; dulness and crepitant râle at the right base. On the second day, he began to raise pneumonia sputa very freely. Pulse 140; tongue coated; no appetite, taking only milk punch. As the pain was not relieved by moderate doses of Tully's powder, four grains were given every four hours, for twenty-four hours. The pain ceased; pulse came down to 108; respiration 40; expectoration ceased. He had now crepitant râles in the upper lobe of the right lung, dulness in the lower, and bronchial râles in the left. The opiate produced a long and profound sleep, on awaking from which, he recovered his brightness, and convalescence very rapidly ensued.

Dr. Paddock stated that he has found, in pneumonia with pain, that opiates are beneficial, while in bronchitis, the symptoms are aggravated by them.

This patient also had mustard and flax-seed poultices applied to the chest. The bowels moved daily, notwithstanding the opium.

Railroad Accident; Amputation.—A healthy young man, aged 33, was run over by an engine, Sept. 19th, receiving a compound, comminuted fracture of the left tibia, and simple fracture of the fibula. For two weeks, an attempt was made to save the limb by the surgeon in charge of the case. Gangrene ensued, with typhoid tongue. Pulse 140–150. Under the use of stimulants and large doses of quinine and iron, the strength improved, and pulse was reduced to 120. On the fifteenth day, amputation was performed by Dr. Paddock, in the middle third of the leg. The tissues were found inflamed nearly to the groin, and there was much hæmorrhage from the distended vessels. The medulla of the tibia was highly inflamed. The lower end of the tibia was found, for four inches in extent, to be very finely comminuted. The stump healed in part by first intention; a small portion only of the anterior flap sloughed away, the wound rapidly granulated, and is now entirely healed. The patient was kept constantly on full doses of quinine, iron and stimulants.

Strangulated Femoral Hernia.—A lady, aged 72, has had, for four years, a bunch as large as a small orange, in the right inguinal region. Last month, on lifting a tub of water, she fainted, and, on recovery, found that the tumor had become as large as a teacup. She sent for a homœopathic doctor, who reduced it to the size of a lime. On the third day, she had stercoraceous vomiting and tympanites; her bowels had not moved.

Was first seen by Dr. Paddock on the eighth day, these symptoms having persisted. He proceeded to operate at once. The hernia was found to be femoral, presenting immediately below Poupart's ligament. The sac was firmly adherent to the surrounding tissues, and the hernia firmly glued to the sac, and to the ring, rendering its return very difficult. The hernia was omental and quite dark. It was returned to the abdominal cavity, and the wound left open. The patient was kept under large doses of morphia for ten days. There was much inflammation, and a foul discharge. The wound was syringed out daily with carbolic acid solution. On the fifteenth day, a large slough, the size of a lemon, evidently omentum, came away, and the patient thence rapidly recovered, and is now, at the eighth week, entirely well, and the wound is healed.

Abscess of Appendix Cœci.—A young man, aged 19, had, two years ago, an attack of severe pain and inflammation in the right groin, and right side of the abdomen. Was sick for several days, and then recovered. He appeared and felt perfectly well, until a year later, when he was attacked with pain in the same region, following a considerable strain in lifting. His mother gave him rhubarb, producing several discharges. On the following day, he was seen by Dr. Paddock. He then had diarrhœa; the bowels were painful, and slightly tympanitic; pulse 80. Opiates were administered. In the evening, the pulse was 100, and diarrhœa continued; expression anxious. The next morning, pulse was 120, bowels hard and tympanitic; the patient, however, was up and about the house, feeling pretty well. That afternoon, Dr. Smith saw the case with Dr. Paddock. The pulse was then 160. The opiates were increased, and hot fomentations applied to the bowels. Two or three hours later, the patient suddenly died, having walked across the room, when he felt faint, returned to his bed and expired.

At the autopsy, the opening from the appendix to the cæcum was found obliterated, the appendix dilated, and a round, ulcerated opening was found in its wall, into the peritoneal cavity. The appendix contained some small seeds and some pus, and pus was found in the adjacent peritoneum, with much lymph.

The opening from the cæcum to the appendix was evidently closed during the first inflammatory attack; and the last attack was due to suppuration and rupture of the occluded appendix.

Diphtheria.—Dr. Wilcox, of Lee, reported that, since the last meeting, he had had several new cases of diphtheria, and three deaths. When the cases are seen early, he finds that the formation of membrane is arrested by the application of a strong solution of persulphate of iron; but when this is done later, it seems rather to do harm. The liq. ferri persulph. is diluted with an equal quantity of water or glycerine, and applied twice a day, at the outset. He uses alcoholic stimulants and quinine, finding the latter to do better than iron. In a case seen at Tyringham, about the time of the last meeting, there was slight exudation on the tonsils, and constitutional symptoms were very slight. The case was not seen again for several days, and then the membrane was found to have extended to the trachea, producing great dyspnœa, and depression was extreme. Inhalations of steam were used. A piece of false membrane, measuring two inches by two and one-half, and one-eighth of an inch thick, was thrown out, with temporary relief, but the patient died in two days. This was one of the oldest patients attacked, being a girl of 13.

Convulsions.—Dr. Reynolds, of Richmond, reported the case of a child, 1 year old, healthy, with a large head. On the first of August, he received a blow on the head, at the base of the skull, by falling against a bracket. An hour later, convulsions came on, the child became very blue and cold, the eyes rolling and winking constantly, pupils dilated, with strabismus, both external and internal. Hot baths and stimulants were used. The attack lasted five hours. Dr. Paddock was sent for, in consultation, but the patient began to improve before he arrived. A dose of calomel was given. The child speedily recovered. Twelve hours later, there was vomiting, but no other bad symptom. Since then, the child has been perfectly healthy, till two weeks ago, when a bump on the head was received, and convulsions returned, lasting twelve hours. Since then, he has been as well as ever.

Cancer of Ileo-cœcal Valve.—Dr. Smith, of Pittsfield, reported the case of a young woman, attacked two years ago with typhoid fever, which was said to have been very severe in abdominal and brain symptoms. She was sick eight weeks, and remained in poor health until ten months later, when she was seized with severe pain in the right iliac region ; bloody diarrhœa came on at the same time, and the pain grew more and more severe, so as to induce screaming. Dr. Smith was then first called. He found a tumor in the right iliac region, as large as his hand, tender, hard, uneven and nodulated. On pressure, a gurgling sound was heard, as of air passing from beneath the hand. The uterus and appendages were found healthy. He supposed the tumor to be connected with the bowels, but could not satisfy himself of its character. The tongue had a typhoid look ; urine scanty ; pulse 130. From the collections of gas in the intestines above the tumor, he judged that the calibre of the intestine was reduced at that point. No pus was found in the dejections. Anodynes were administered, with tonics and counter-irritants. In two months, the appetite had returned, the pulse was reduced to 80 or 90, pain was diminished, tongue cleaner ; had ceased to lose flesh, and the tumor was perceptibly smaller. Keeping the bowels quiet for four or five days did not increase the size of the tumor. The patient remained in this condition for several months, and then passed from under Dr. Smith's care. A month ago, he was again called to her, and found her suffering from peritonitis. A few days before, she had taken some form of vermifuge, administered by a "worm-doctor," which produced diarrhœa and excessive exhaustion, and the peritoneal inflammation speedily supervened. She died in a few days from acute peritonitis.

An autopsy was made on the following day. On opening the abdomen, the cæcum was found enlarged, and containing a hard substance, whose character was difficult to determine until the cæcum was slit open, when a tumor was found, two and one-half inches in length, and one inch and a half in diameter, cylindrical and tapering to a point, the ileum traversing its length, and the ileo-cæcal valve situated at its extremity. This orifice was very small, scarcely larger than the director which was passed through it, and deep ulceration surrounded it. The tumor was as hard as scirrhus, nodulated, and much ulcerated. At its apex, near the valve, was a horn-like projection, three-fourths of an inch in length, hard like the body of the tumor. Externally, the ileum was found to be intussuscepted into the cæcum, and held in its new position by strong adhesions. The tumor, on section, showed a firm, greyish structure, containing cavities filled with pus. Under the microscope, abundant fusiform cancer-cells appeared, with pus-corpuscles. The specimen was exhibited.

Dr. Miller, of Sheffield, described a peculiar attack, from which he has just recovered. About four months ago, he was seized with pain in the right chest, two inches from the sternum, below the fifth costal cartilage. This was accompanied with a dry, hacking cough, without sputa. He felt listless, with no desire to move about, lost twenty pounds of flesh, was unable to lie on the right side without great increase of pain.

He had frequent attacks of vertigo. The pain continued to increase, until a week ago, when he had an attack of coughing, felt a sense of giving way at the seat of pain, and coughed up a hard substance, which he did not examine minutely, but observed that it was of dumb-bell shape, of the size of a crow-quill at the constricted part, an inch in length. The centre was bluish in color, the ends of a lighter hue. Within an hour, he felt complete relief from pain, and could straighten himself up for the first time in four months. He at once regained his appetite, and began to improve in all respects. The cough disappeared, and he now feels perfectly well, and begins to gain flesh.

Dr. Smith, of Pittsfield, remarked that this was doubtless a case of foreign body in one of the bronchi, and narrated a similar case in his own practice, the patient having got a beard of wheat into one of the bronchi, producing all the usual symptoms of phthisis, which disease he was supposed to have. After some months, he coughed up the beard, surrounded with mucus, and recovered at once.

Dr. Miller said that it was possible he had inhaled some foreign body in harvesting ; but he was never aware of doing so.

Dr. Mercer, of Pittsfield, reported the case of a little girl, 2 years old, who, in March last, swallowed a silver quarter of a dollar. All efforts to induce it to pass by the bowels were unavailing. She has since suffered from wheezing respiration. On Nov. 18th, she coughed, vomited, and threw up the coin, much blackened, which had lain for eight months, either in the stomach or œsophagus, probably the latter.

Dr. Stiff (*Correspondenz-Blatt der deut. Gesell. f. Psychi. u. gerichtlich. Psychol.*, 1872, 11 and 12) mentions a species of optical illusion, of which he was the subject during an attack of scarlatina. He saw hunts, numberless wild beasts followed by as numberless packs of hounds; behind these, innumerable huntsmen; soon again, great masses of troops falling upon one another ; at another time processions, herds of slaves, masses of people, &c. Most remarkable, however, was the mode in which these masses were grouped and moved. They arose from two sides and approached, or rather two columns advanced from the same side to meet in the middle, where was an undistinguishable confusion. These phenomena were visible with the eyes shut, and in a dark room. In the light they disappeared. The fashion of the appearance corresponded so exactly to the course of the large vessels of the retina, that he concluded it must be owing to the blood flowing through the veins, and that the sight of the various figures was dependent upon the impression made by the blood corpuscles moving through the veins to the papilla, where was the confusion of all forms. He questions whether the phenomena seen during delirium tremens may not sometimes be of this nature.

Bibliographical Notices.

The Science and Art of Surgery. By JOHN ERIC ERICHSEN. A new Edition, enlarged and carefully revised by the Author. 2 vols. Philadelphia: Henry C. Lea. 1873.

IN his preface to this new American edition, which, we understand, is a re-print from the sixth English edition, Mr. Erichsen expresses himself much gratified by the way in which his work has been received in this country. We are happy to be able to add our testimony to that of others as to the position which the book still continues to occupy in surgical literature, in spite of the great increase in the number of surgical text-books the last few years. One cannot, properly speaking, call it a text book, being more suitable as a work of reference to the practitioner rather than a book to be placed in the hands of the medical student. The English surgeons are preëminently a practical class of men; this, perhaps, may in a measure explain the popularity of English surgical works. The present work is by no means an exception to this rule. The illustrations, for instance, are, as they should be, very numerous, and, although they cannot all be said to possess equal merit, are nevertheless, well adapted to serve the purpose for which they were intended. There is one criticism, however, which we think can be made with regard to this point, which is true not only of this but of most works on surgery, and that is that writers are only too apt to select exaggerated forms of disease for the purposes of illustration. We are all familiar from our medical boyhood with the *noli me tangere* of Druitt, and like horrors, but how many of us have seen such specimens of the ravages of disease. A glance at the chapters on tumors and scrofulous inflammations has suggested this criticism. We cannot help feeling that this is a relic of the olden time, when medical books were intended not only to instruct the profession, but to impress the laity. We find the division on operative surgery occupying the most conspicuous part of the work under the title of "First Principles." Apart from the appropriateness of such a title, the propriety of which we very much question, we should prefer to see the chapters on amputations and excisions at the end rather than at the beginning of a properly arranged work on surgery. The arrangement of many subjects is equally faulty, and in another edition the department on the eye might well be left out entirely. A little knowledge is a dangerous thing, and we hope to see specialties like this and the ear, for instance, left to those who thoroughly understand them. We are happy to record an improvement in the paragraphs headed *treatment;* the old school plan, which one so frequently runs through in despair in hopes of finding some good suggestion, has practically been abandoned, and a more rational system of treatment has been substituted. "The books," in this respect, need thorough overhauling, and, more than all, those on surgery. The readiness with which the reader amuses himself with attractive descriptions of surgical operations and skips treatment, may, perhaps, account for the many poor physicians the ranks of surgery contain. We have pointed out some of the faults of this book; it would be a much longer task to enumerate the many points of excellence which it contains. Indeed, its record speaks for itself, and it hardly needs our testimony to the fact that it still occupies the front rank in surgical literature.

Handbook of Physiology. By William Senhouse Kirkes, M.D. Edited by W. Morrant Baker, F.R.C.S. Eighth Edition. London: John Murray. 1872. Pp. 835, small 8vo.

This volume might well be used to replace many of the physiological text books in use in this country. It represents, more accurately than the works of Dalton or Flint, the present state of our knowledge of most physiological questions, while it is much less bulky and far more readable than the larger text books of Carpenter or Marshall. As a book of reference, however, it cannot take the place of these last mentioned works. The style is generally clear, and the expressions well chosen. The description of the arterial pulse is, however, an exception to this statement. Here the author, while recognizing the difference between the rapidity of the pulse wave and that of the stream of blood, seems to adopt a theory which is only comprehensible on the supposition that the two rates are identical.

The account given of the production of heat in the animal body is not so full as could be desired. We look in vain for any mention of the views of Helmholtz or Heidenhain on the part played by the muscular system in the performance of this important function.

In the chapter on the physiology of vision, it is rather surprising to find the author gravely discussing the old question why we do not see objects inverted. If some physiologist would explain why we *should* see objects inverted, it would greatly contribute to the elucidation of the problem.

These, however, are matters of minor importance. In general, the work seems to be very well done, and the book is admirably adapted to be placed in the hands of students. B.

Lessons in Elementary Anatomy. By St. George Mivart, F.R.S., &c., Lecturer on Comparative Anatomy at St. Mary's Hospital. London: Macmillan & Co. 1873. Pp. 535.

This book is particularly welcome as an attempt to present anatomy in a new manner. The author declares, in the preface, that the book has no pretensions to be a comparative anatomy, but that its purpose is merely to show the most important variations in the structure of the lower animals from that of the human body. Though there is nothing original in the idea, yet we agree with the author in thinking it the first attempt of this special kind which has been published.

Human anatomy is the starting point; and we consider it the proper one for a course on general anatomy to students who are not to grapple with the deepest problems (which can be worked out only in the laboratory), but who are to acquire the general principles of morphology; for, however vague their ideas may be at the start, they have a certain knowledge of their own bodies which they have not of those of the lower animals. A course of this kind is a good preliminary to the special study of human anatomy, as many points acquire a significance by comparison, which, when considered by themselves, they do not possess. Hence, we consider the plan of the book a good one, and pass on to its execution.

After describing any particular portion of the human frame, the author enumerates many striking differences in other forms in a way which is clear enough for each individual case, but which, after a time, leaves the mind rather confused. We think this would be avoided if an outline were given of the ideal plan upon which the part in question is constructed, and then the most marked cases of variation from it, as well as from the human type, were enlarged upon. The introduction of a little physiology to show the advantages gained by certain variations would tend to fix the latter in the mind of the student. The chapter on "the internal skeleton generally considered" is good, but does not atone for the omission first alluded to. At the end, the author gives the peculiarities by which man's place in nature may be determined. He enumerates the points in which man differs from fish, batrachians, reptiles, birds, and certain orders of mammals, respectively, and, finally, from the higher apes.

There is much to praise in the work, though it leaves a good deal to be desired. The task was a very difficult one, and we are grateful to the author for undertaking it. A second edition will, no doubt, be better in many respects, but, as it is, the book supplies a want, and in proper hands will prove a valuable text-book. The illustrations are very numerous, and, as a rule, good in design, but many are poor in execution.

BOOKS AND PAMPHLETS RECEIVED.

The Logic of Medicine. An Address delivered on the occasion of the Twenty-fifth Anniversary of the New York Academy of Medicine, Dec. 30th, 1872. By Edward S. Dunster, M.D. New York: D. Appleton & Co. 1873. Pp. 31.

Third Decennial Catalogue of the Officers and Alumni of the Bellevue Hospital Medical College, 1861–71. New York: D. Appleton & Co. 1873. Pp. 66.

Reports of the Town Officers of the Town of Webster for the year 1872–73. Pp. 80.

Report on the Progress of Ophthalmology. 1872. Prepared for the American Ophthalmological Society. By B. Joy Jeffries, A.M., M.D. Harv. Pp. 60.

The Charter and By-Laws of the New York State Inebriate Asylum. Printed at the "Record" Office. 1873. Pp. 18.

American Association for the Cure of Inebriates. Proceedings of the Third Meeting, held in New York, October 8th, 9th and 10th, 1872. Published by order of the Association. Albany. 1873. Pp. 127.

Fourth Annual Report of the State Board of Health of Massachusetts. January, 1873. Pp. 473.

Report of the New or Fifth Decennial Revision of the United States Pharmacopœia to the Medical Society of the State of New York. By Edward R. Squibb, M.D. New York: D. Appleton & Co. Pp. 25.

Report of the State of the New York Hospital and Bloomingdale Asylum for the year 1872. New York. 1873. Pp. 25.

Abstracts and Intelligence.

RESEARCHES CONCERNING CHOLERA.—The *British Medical Journal*, Feb. 22, 1873, contains an account of the researches which are being made by Messrs. Lewis and Cunningham on the mode of origin and diffusion of cholera. Their *brochure* is divided into three parts, and contains valuable information under the following heads :—1. Microscopic Examination of the blood ; 2. Experiments on the Introduction of Organic Fluids into the System ; 3. Experiments on the Section of the Splanchnic and Mesenteric Nerves. The present article treats only of their researches comprised under the first of these subdivisions.

Before proceeding to the investigation of the peculiarities and changes to which the blood of patients sick with cholera is subject, the authors made themselves conversant with the changes which are apt to occur in specimens of blood taken from healthy persons, or from such as were suffering from diseases other than cholera, and they were thus enabled to ascertain the distinguishing characteristics of the specimens of cholera-blood. And such characteristics were by no means wanting. The authors describe with much minuteness a series of remarkable changes which were constantly repeated in specimens of cholera-blood, the temperature of the air at the time varying from 76·3° to 98·2° Fahr. The narrow rim of serum at first observable at the circumference of the drop of blood, which had been placed on the glass under the microscope, ultimately widened into a clear area of fluid, whilst the minute clot contracted. The number of white corpuscles at first visible was small and not very notable, but with the widening of the ring of serum a series of very remarkable phenomena gradually occurred, beginning an hour after the blood had been drawn. These changes are thus described:—"Normal-sized white corpuscles began to migrate into the fluid, but, in addition to these, and in far greater numbers and activity, were much larger and more delicate bioplastic bodies ; cells they were not, for they had not at this time the faintest differentiation of wall, contents or nucleus. They were simply masses of fluid bioplasm—bioplasm so fluid and diluted as to be in many instances almost, if not entirely, undistinguishable by refraction from the surrounding medium. . . . . Gradually the consistence of these large bioplastic masses appears to increase, and they, as it were, grow into sight. Their movements are extremely constant and free—no mere alterations of form, but free progression, along with such movements. The alterations in form vary extremely, sometimes consisting of the emission of rounded and lobulated protrusions, and at others of the running out of elongated, slender extensions and threads." Similar bodies may at the same time be seen in the serous spaces of the clot. After a time they begin to divide, and give rise to a second generation of bioplasts, smaller, though scarcely less active. But at the close of twenty-four hours from the beginning of the examination, only a few remain mobile ; the majority have considerably increased in size, whilst they have also become denser in substance and more full of granules. At this stage they are more or less spherical, and not unlike pus-corpuscles. During all this time the serum remains clear and free from all traces of bacteria.

The authors do not wish it to be inferred that there is anything distinctly specific in the above-mentioned changes occurring in cholera-blood, but they think the blood in this disease is much more prone to exhibit such changes to a well-marked extent. Similar amœboid corpuscles were detected creeping out of the clot, even in most of the specimens of healthy blood, but in no single case in anything like the same proportion as in the blood obtained from persons suffering from cholera.

These observations seem to afford an explanation as to the nature of the bioplastic cells which are abundant in, and characteristic of, evacuations passed during the course of cholera. There can be little doubt that cholera evacuations are very frequently contaminated with escaped blood, and we may infer that such changes as have been described may occur as rapidly when blood is effused upon the inner surface of the intestines. Such bioplasts "in their early stages will correspond with the freely mobile amœbæ of the evacuations; when rather older, they lose their freedom of motion, and show more feeble changes of form, ultimately becoming motionless and pus-like, or, rather, exudation-like cells, such as are observed in the flakes of lymph in peritonitic and similar effusions, and such cells we know to form the great bulk of those present in perfectly recent choleraic dejections."

Other important facts bearing upon the "germ theory" in its application to cholera have been made known by these investigations. Not the faintest trace of bacteria was detected in any instance in the specimens of blood submitted to immediate investigation, and, as a rule, such organisms were similarly absent from the specimens submitted to continued observation. "The idea that bacteria are normally present in the blood of cholera may be finally dismissed." With regard to the presence of fungus-germs as a characteristic of the disease, the authors write, "There is absolutely nothing in favor of any such view."

With regard to the presence of sarcinæ in the blood, the authors cannot reconcile their observations with the statements of Lostorfer and others as to their constant occurrence in this fluid. On only two occasions did they observe them, and they incline to the opinion that they are crystalline rather than organized bodies.

These observations on the blood in cholera, taken in conjunction with those previously recorded concerning the dejections, "do not tend to indicate the presence of a microscopically demonstrable morbid poison in either medium;" the present researches tend to throw considerable light on those published about two years ago, since they show that "the escape of materials from the blood is sufficient to account for the presence of the most remarkable and constant microscopic features in the evacuations."

Beriberi in Brazil.—Dr. J. F. Da Silva Lima has written on the above curious disease, a very entertaining abstract and review of which appears in the March number of the *Edinburgh Medical Journal.* The affection is divided into three types or varieties—the paralytic, the œdematous and the mixed.

In the first, or paralytic form, the disease first manifests itself by a vague feeling of languor and discomfort, of weakness, and disrelish for all exertion. This is followed by a tenderness in the extremities, especially the inferior, generally regarded by the patient as muscular rheumatism; along with this, there is numbness or diminution of the cutaneous sensibility. Weakness in the extremities now ensues, and the patient's legs give way under him, so that he is obliged to take to bed, where he lies on his back, able to bend his knees or move his legs only with painful effort. Similar symptoms next supervene in the upper extremities, accompanied by loss of tactile and muscular power. There is much pain on pressure over the paralyzed muscles. Another characteristic symptom now appears, viz., the feeling of a cord drawn tightly around the lower part of the abdomen, gradually widening and rising till it reaches the level of the axilla, giving the sensation of the abdomen and chest being encased in boards. As soon as this feeling of constriction reaches the thorax, dyspnœa begins to appear, which increases as the tightness extends upwards. Some slight puffiness frequently makes its appearance in the face and lower extremities. The former, as well as the upper part of the trunk become of a palish blue color. The dyspnœa gets worse; convulsive movements are frequent in the hands and arms, more rarely in the legs, and death ensues by asphyxia.

The second variety appears to be ushered in by a hard, tense and elastic œdema of the legs, which soon spreads to the trunk, face and arms, doubling almost at times the bulk of the body. The dyspnœa is great, and constantly increasing, while the internal organs, particularly the lungs and liver, become congested, and death takes place either from asphyxia or from congestion of some of the important viscera.

In the third, or mixed, variety of the disease, the predominant symptoms above noticed are pretty evenly balanced. The rate of mortality is said to be, at least, 50 per cent. If the patient recovers, there is great danger of a relapse, if he remain within the tropics, and the only hope of safety lies, therefore, in leaving the country. The most efficacious mode of treatment consists in leaving the tropics as soon as the first symptoms show themselves, and the patient is very often quite well by the time he reaches Europe.

Sea-bathing, continued for many months, is the only other mode of treatment which exerts any curative influence upon the disease.

Robur.—The introduction to public favor of a new alcoholic beverage, recommended on excellent authority for general use, is a matter of some importance. Robur was announced as a new tea-spirit. We have been asked to form a judgment of it; and, as dietetic qualities of an unique character have been claimed for it, and it is rising into popularity, we have thought it right to subject it to critical examination. Full opportunities have been afforded for investigating analytically its properties at its place of manufacture; and to these we have, of course, added the examination of samples purchased of retail agents who supply the public. Medical men are likely to be questioned as to the character of this new form of alcohol; and the materials for an opinion are of two kinds, theoretical and practical. Theoretically, the combination of theine and tannin with alcohol has much to recommend it. Theine and alcohol both belong to the class happily defined by M. Angel Marvaud, in his recent treatise, as economizers of force—

"aliments d'épargne;" and otherwise as aliments preventive of waste —"aliments deperditeurs." In the discriminative use of alcohol, and in the right use of tea as a beverage, this function must always be considered as of prime importance. It is to this, even more, perhaps, than to its stimulating properties, that a large part of the value of alcohol in fevers and in exhaustive diseases must be held to be due. The universal instinct of mankind has selected the plants which furnish theine or its analogues, caffeine and theobromine—tea, coffee and maté —in virtue of similar properties. That alcohol gives wings to tea, every one who has added a *chasse* to a cup of black coffee as a digestive after dinner, or has "laced" a cup of tea with a liqueur of brandy after exhaustive fatigue, will readily testify. The same principle is involved in the composition of robur. It is a pure spirit, singularly free from fusel-oil, with which most brandy and whiskey are largely contaminated. It is extremely palatable—most so when mixed, like toddy, with hot water, and sweetened. It contains a considerable percentage of theine, with tannin and sugar. It leaves on the palate the pure flavor of tea, and no more wholesome spirit can be found. As a spirit intended for popular use, it has many great merits. It does not tempt to intemperance, for it rather helps than muddles the intelligence; and, if robur were substituted for gin, brandy or whiskey, it would, we think, be a clear gain to the cause of temperance. The digestive properties which Dr. Lankester asserts it to possess are such as have long been attributed to the *chasse café*, which it resembles in character. Medically, it is, we think, likely to be more useful than any of the forms of spirit which are in daily use. On the whole, we consider that no more has been claimed for it than is fairly its due, and that it is a valuable addition to the dietetic list.—*Brit. Med. Jour.*

RESIN OF COPAIBA A DIURETIC.—Dr. Wilks speaks with the greatest confidence of the value of the *resin* of copaiba as a diuretic. It is thought that the oil acts more especially on the mucous membranes, and is therefore useful in affections of the bronchial, vesical and urethral surfaces. If this be so, it is equally certain that the *diuretic properties* reside in the *resin.* Dr. Wilks has found it very difficult for patients to take the ordinary pharmacopœial drug; he therefore has substituted for it the simple resin, and finds it equally or more efficacious. He gives fifteen or twenty grains in mucilage and flavored water three or four times a day, and has had numerous cases showing its marked diuretic properties. There is now in Guy's Hospital a man who came in with ascites, and who, after taking numerous other remedies, was ordered the resin. The amount of urine was at once doubled in quantity, and now, after a few days, the fluid has almost disappeared. Dr. Wilks says he has lately had as a private patient a "drunkard builder," with cirrhosis of liver and enormous ascites, for whom he likewise prescribed the resin; a diuretic action was at once effected, and the dropsy quickly disappeared. In heart cases, also, he has given it with great success. Dr. Wilks states that he has often given the remedy and failed; but, on the other hand, when it has succeeded, the result has been more striking than that arising from any other diuretic he has seen. He would wish it were placed in the Pharmacopœia, as it is not kept by chemists.—*Lancet*, March 22, 1873, p. 410.

Medical Miscellany.

The conjoined twins, Millie and Christine, are now known as the two-headed nightingale.

Not American this Time!—"It has just come to light," says the *Lancet* of March 22d, 1873, "that during the last few years a large trade has been going on in forged diplomas purporting to be from the *German* University of Marburg, no less than forty persons in this country having purchased the worthless documents."

The *Practitioner* will appear in May in an enlarged shape, with sixteen additional pages devoted entirely to hygienic questions. The support of distinguished authorities is promised.

The *Canada Lancet* ascribes certain propositions concerning smallpox and vaccination, which first saw the light in the editorial department of this Journal on Jan. 16th, 1873, to "a writer in the *Medical and Surgical Reporter.*"

Dr. Brown-Sequard delivered the second part of his lecture on *The Origin and Signification of the Symptoms of Brain Disease* in the lecture-room of the Boston Society of Natural History on Saturday evening. The first part of this valuable lecture was delivered here on Oct. 5th, 1872, and appeared in the Journal of Oct. 17th. We hope very shortly to present the second part to our readers.

A magnificent present of Peruvian skulls has lately been received by the Anthropological Institute (London), from Consul Hutchinson, of Callao. This highly instructive series consists of 150 specimens, dug out, not gathered from the surface, of the old original burying grounds of Paramayo and of Ancon, twenty and thirty miles north, and from Corso del Oro, about one hundred miles south of Callao. Twenty-four of these were taken by the Consul himself from the Huacas of Ancon, and were probably those of Chinchas, and, perhaps, Ayonaras.—*Nature*, March 6th, 1873.

Toner Lectures.—The first lecture of this course, on "The Structure of Cancerous Tumors, and the manner in which adjacent parts are invaded," was delivered by Dr. J. J. Woodward, U.S.A., at Washington, March 28th. The images of some seventy photographs of specimens were thrown on a screen by the calcium light. The lecture was very well attended, and appears to have been most successful. The next will be by Dr. Brown-Séquard, on April 18th.

The *Homœopathic Review* says:—

"The obligations of the homœopathic practitioner to his patients to relieve pain and to stave off death are higher than his duty to practise homœopathy. If he cannot, whether from the incompleteness of science, or from his own imperfect acquaintance with it, prescribe homœopathically, he must use such measures as, within his knowledge, are most likely to achieve the end he has in view. He is the most successful physician who, within the limits where a homœopathically acting medicine can effect good, can relieve and cure, *most seldom* falls back upon an allopathic palliative."

The Art of Prescription Writing has some curious illustrations. The following was composed by a Fellow of a State Medical Society, not a thousand miles from Massachusetts:

"Ext. application
℞. Aq Aurenti Fol ℥ vi
Hydr—Crosive gr i
Glycine ʒ iii
Sig Applyey night."

Pulse of Various Animals.—Vatel, in his *Veterinary Pathology*, gives for our domestic animals the following pulse:—Horse, from 32 to 38 pulsations per minute; ox or cow, 25 to 42; ass, 48 to 54; sheep, 70 to 79; dog, 90 to 100; cats, 110 to 120; rabbit, 120; guinea pig, 140; duck, 135; hen, 140.

Arsenic in Constipation.—Dr. Isnard employs arsenic in small doses for the relief of constipation. He affirms that this agent stimulates the appetite, and that by exciting the peristaltic motions of the intestine, and augmenting the intestinal secretions, it permits the digestion of the ordinary articles of food.—*Lyon Medical.*

Anatomical Models.—Three men connected with the place called "Dr. Kahn's Museum," in London, were summoned recently for exhibiting certain indecent and demoralizing representations for the purpose of gain. There was a second summons calling on them to show cause why the models seized by the police should not be destroyed. Mr. Besley (instructed by Mr. Collette, on behalf of the Society for the Suppression of Vice) appeared for the prosecution. Mr. George Lewis, Jun., who appeared for the defendants, said it was their wish that the magistrate should not pass judgment on this case, but that facilities should be at once given for sending it before a higher tribunal, and getting the question finally decided whether models which had been publicly exhibited for twenty-five years really formed the subject of a criminal offence. Mr. Knox said he should commit the defendants to the Central Criminal Court, and send the models to Newgate for the inspection of the judges. Bail was accepted.—*British Medical Journal.*

NOTES AND QUERIES.

A new Remedy.—"The larger amount of the mortality of scarlet fever might be avoided by the processes of disinfection, separation, and a religious adherence to truth," says the astute author of "The Romance of Medicine." Has he tried it? We judge not by his writings. Prevalebit.

Credat "Inquirer."—M. Revillod, of Geneva, cautions against the use of collodion with a view to the abortion of smallpox pustules; as it causes pain and strangulation of the skin, does not prevent suppuration, &c. *His* nostrum is soap ten parts, glycerine four parts, mercurial ointment twenty parts. *This*, he says (*Gaz. Med.*, March 8), will prevent scarring—if used early enough! No Doubt.

Mortality in Massachusetts.—*Deaths in seventeen Cities and Towns for the week ending March* 29, 1873.

Boston, 146—Charleston, 15—Worcester, 18—Lowell, 27—Milford, 3—Chelsea, 8—Cambridge, 17—Salem, 9—Lawrence, 13—Springfield, 6—Lynn, 22—Gloucester, 8—Fitchburg, 4—Newburyport, 4—Somerville, 6—Fall River, 15—Holyoke, 8. Total, 329.

Prevalent Diseases.—Consumption, 72—pneumonia, 29—cerebro-spinal disease, 25—scarlet fever, 9.

Deaths from smallpox occurred as follows:—Four in Boston, one in Charlestown, one in Lawrence, one in Gloucester, and one in Holyoke. Deaths from cerebro-spinal disease occurred as follows:—Sixteen in Boston, five in Charlestown, and four in Lynn. During the four preceding weeks thirty deaths from cerebro-spinal disease have occurred in Boston.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, April 5th, 140. Males, 68; females, 72. Accident, 5—abscess, 1—apoplexy, 1—asthma, 1—inflammation of the bowels, 1—disease of the bowels, 1—bronchitis, 4—inflammation of the brain, 4—congestion of the brain, 2—disease of the brain, 4—cancer, 1—cyanosis, 2—cerebro-spinal meningitis, 14—consumption, 18—convulsions, 2—croup, 3—debility, 3—dropsy, 2—dropsy of the brain, 2—exhaustion, 1—erysipelas, 2—scarlet fever, 10—typhoid fever, 4—gastritis, 1—disease of the heart, 3—hæmorrhage, 1—disease of the hip, 1—intemperance, 1—indigestion, 1—disease of the kidneys, 1—disease of the liver, 1—congestion of the lungs, 6—inflammation of the lungs, 7—marasmus, 4—old age, 6—paralysis, 2—puerperal disease, 4—premature birth, 1—purpura, 1—scrofula, 2—smallpox, 2—suicide, 1—teething, 1—tumor, 1—unknown, 4.

Under 5 years of age, 57—between 5 and 20 years, 20—between 20 and 40 years, 33—between 40 and 60 years, 20—over 60 years, 10. Born in the United States, 96—Ireland, 28—other places, 16.

THE

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Original Communications.

A CASE OF FRACTURE OF THE INTERNAL TABLE OF THE OS FRONTIS ALONE, THE EXTERNAL TABLE REMAINING UNBROKEN. DEATH. POST-MORTEM.

By W. H. Triplett, M.D., Woodstock, Va.

On account of the extreme rarity of this form of fracture of the skull, I am induced to publish the subjoined case; and in view of the insidiousness of the inflammatory processes set up, and the formidable lesions of the meninges and the brain substance developed at the post mortem, I give the case somewhat in detail, as gleaned from the note-book of my brother. It occurred in the practice of Dr. Jos. J. Triplett, of Mt. Jackson, Va.

On the night of October 24th, 1872, A. C., blacksmith, aged 45 years, of medium height, spare, but very athletic, was struck with a stone over the right frontal eminence, making a clean, clear-cut wound through the scalp down to the bone, shaped something like the letter V inverted, the legs being about an inch in length, exposing the bone.

A portion of the periosteum, half an inch in diameter, had been carried away, leaving the bone roughened. He had not been stunned by the blow, and had not the slightest suspicion that he had received a mortal wound. He had gone home at once, a distance of several hundred yards, without the slightest inconvenience, and half an hour afterwards presented himself at Dr. Jos. J. Triplett's office to have his wound dressed.

No fracture was discovered, but the patient was advised to treat it as a serious wound, and to stay in his house for some days, keeping quiet and living a little sparingly.

The man ridiculed the idea, insisting "he was'nt hurt much, it was only a little flesh wound." On Monday evening, Oct. 28th, four days after the injury, he again made his appearance, to have his wound examined. He complained of pain in it. Upon inspection, it appeared healthy. It was not known at the time, but the man had worked hard all day at his trade. He was again enjoined to keep quiet, and a saline purgative given him.

On the following evening, Tuesday, the Doctor was sent for, and found his patient in bed, under considerable constitutional disturbance; was quite feverish, with pulse at 90; severe cephalalgia; had had several chills during the day.

The wound looked healthy, but was again probed, and thoroughly examined, to make certain that no fracture had been overlooked. None was discovered. The man said he had been subject to chills and fever, and that he did not think his condition had any connection with the wound.

An active purgative, with ipecacuanha, was given him, and having had several copious evacuations during the night, he was much improved the next morning. His skin was moist, and pulse normal; no cephalalgia.

The man felt himself so fully restored that he told the Doctor "he thought he did not need any more medicine, and that he would let him know if he did not get along well." He was again urged to keep quiet, and to live on low diet. The Doctor visited him the next day, telling him he had simply called to see him.

He still claimed to feel comfortably, with the exception of an occasional sharp pain through the wound. This was the eighth day since the injury. Friday, he again made his appearance in the Doctor's office; came in laughing. He had just met the party with whom he had had the difficulty, and a reconciliation had taken place. His face was a little flushed, and he had some cephalalgia. At 5 o'clock, P.M., Saturday, the Doctor was again sent for. He found his man sitting up, near the stove, laboring under severe head symptoms. His head was hot, but he kept it near the stove, as he found the most ease in that position. There was severe cephalalgia, with a feeling of fulness, or tension, through the temples; face flushed, and profuse lachrymation; pulse 90, regular, and not very strong; but the carotids were somewhat violent; he was perfectly rational, but exceedingly desirous of sleep; said, "if he did not get something to put him to sleep, he should go crazy." An active cathartic was given him, and a blister applied behind either ear. In the course of several hours, a Dover's powder was administered, with not a little apprehension. The next morning, Sunday, he was a little improved; had slept some during the night, but there was still intolerance of light; he was very talkative, and eager to enter into political discussion; no alteration of pulse; tongue dry. Pupils dilated, the right one the larger of the two. This symptom had been noticed the day previous. The lids of the right eye were red and swollen. The face still seemed preternaturally red. He ate some mush and milk; had been living on that diet from the Tuesday previous.

The man could not be induced to leave the stove and go to bed; "he was chilly, and felt best near the stove." Sunday night, he allowed his friends to put him to bed, with the head elevated. No opiate was ventured upon, for fear of aggravating the head symptoms. The scalp did not appear hot, and from the circumstance that the warmth of the stove gave him ease, and also on account of his chilly sensations, cold applications were not made to the scalp. Hot bricks were kept to his feet, and spirits of nitrous ether given internally. He appeared much worn and debilitated.

The following day, Monday, the symptoms were worse; pulse frequent and irregular; pupils contracted; the swelling and discoloration of right eyelids increased; some disposition to stupor. The patient was found sitting on the edge of the bed, his feet resting on the floor. Cephalalgia and intolerance of light, but quite rational and talkative, keeping his eyes closed. An ounce of blood was taken from each temple, by means of cups. An active cathartic was administered. In the course of an hour afterwards, he was taken with a severe rigor; fifteen grains of hydrate of chloral promptly arrested it. Two hours subsequently, he had premonitions of another attack, and a small dose of the chloral aborted it.

From this time he rapidly passed into deep stupor. On Tuesday night, he was aroused with difficulty, when he would answer the questions put to him very quickly, but intelligently, and again pass into insensibility. The pulse was intermittent, frequent and small; mouth parched. Wednesday, there was decided coma; insensibility of pupils to light. On the evening of this day, the patient became hemiplegic on the left side; but when the leg or arm was pinched, he indicated sensibility by moving the corresponding limb, as if to stop the procedure, crossing them over to the opposite side. He kept up a constant motion of his right hand about his head, as if driving away flies; previous to this he had used the left hand the most. During the night there was was universal paralysis of motion and sensation, and the only visible expression of remaining life was respiration, which was 40 per minute, regular, with occasional sighing; pulse rapid, intermittent, irregular, and difficult to count. Thursday morning, at six o'clock, he died, being fifteen days after the injury.

At three o'clock, P.M., of the same day, nine hours after death, an inquest was held over the body, and a post mortem made, in the presence of the jury, by Drs. Jos. J. Triplett and George W. Koontz. When the scalp was reflected over the site of the wound, the subjacent bone was found white, as though dead, and denuded of periosteum of nearly an inch in extent. In removing the calvaria, several ounces of very offensive straw-colored fluid escaped, mixed with pus and flakes of lymph. Within the calvaria, and immediately under the white discoloration of the external table, the internal table was fractured, and a spicula of bone, a third of an inch broad and about twice that length, was found pressing upon the dura mater, which had become detached over a space an inch or more in diameter. The fracture projected about two lines, and was covered with pus, as was also the dura mater. The membrane had not been perforated, but was readily torn, showing its disorganization in this vicinity. Corresponding with the fracture, there was a cup-shaped cavity of the anterior lobe of the right hemisphere. It was several inches in extent, quite shallow, and partially filled with pus. The arachnoid and pia mater had been destroyed over this entire surface, by ulcerative absorption, which seemed to have been most intense in the cortical portion, destroying the vascular envelope primarily. The deepest point of the cavity could not have been more than half an inch below the natural level, and was so gradual in the line of ascent to the adjacent surfaces of the cerebrum as to be marked with difficulty. The whole of the right hemisphere was covered with pus and lymph, which was also infiltrated under the pia mater in considerable quantity. In making sections of this hemisphere, there was evident loss of natural consistence throughout, and the anterior lobe was pulpy. The left hemisphere was natural in consistence, showing none of the products of inflammation, but presented numerous hæmorrhagic points, as though engorged.

The jury being satisfied that the man had come to his death by reason of the blow upon his head, desired that the dissection proceed no further, and brought in a verdict in accordance with the facts.

One of the singular features of this case was the circumstance that the man was not stunned by the blow, and the insidiousness of the inflammatory processes. Another extraordinary fact was the absence of convulsions and delirium, notwithstanding the most extensive and destructive inflammation of the meninges and brain substance of the whole right hemisphere. In view of the circumstance that the man had received little or no concussion of the brain, and, *a fortiori*, no contusion or laceration of its substance, the opinion was formed that the trouble grew out of fracture of the internal table, a prediction that the post mortem fully verified.

December 15, 1872.

ELONGATION OF THE UVULA.

By F. B. A. Lewis, M.D. Harv.

The following case, coming to my notice a few weeks since, and one of quite a number during fourteen or fifteen years of similar character, has led me to think that many such cases pass unnoticed by the general practitioner as regards the true cause.

Charles G., farmer, aged 40, has been affected with an irritating cough for several months. Has applied to various physicians, and received various remedies, cough mixtures, so-called gargles, &c. &c.; but, experiencing no relief, has resorted to most of the nostrums in general use, besides ordinary house remedies. Has had no soreness in chest, except after each coughing spell. Does not cough until a tickling sensation is felt in the throat, and then the attack is uncontrollable. Is worse lying down, and is unable to sleep much of the time, unless in sitting position. General appearance gradually failing.

On examination, the throat was much congested from irritation, and tenacious mucus adhered to posterior wall. The uvula was seen to be much elongated, twisted to one side from pressure, and having the little bulbous sac of serum at the extremity, as usually seen in chronic cases. One fourth of an inch was at once removed, with scissors for the purpose, and from that time the cough disappeared, and has not returned. It is remarkable that it did not continue for a time, as the remaining irritation or habit generally causes its continuance for a variable period; but in this case it ceased at once, without reappearance. It appears from this, and similar cases, that this difficulty is too often treated by medicinal means, for although astringent washes may sometimes relieve the irritation by shortening the uvula temporarily, it invariably relaxes and reproduces the cough. Of course, the relative capacity of the fauces has much to do as regards the length of the uvula which will cause trouble. In examining some cases, we find it but little elongated from the normal dimension, but we may find a narrow opening and thick, fleshy tongue, upon which it rides almost constantly, and causes as much irritation as would a much longer one in a differently shaped throat. In phthisical patients, as soon as the general system becomes relaxed from debility, the uvula often conspires to aid the harassing cough, and excision of a portion of it generally affords much relief.

Most of the text books instruct us, in removing the uvula, to seize it with forceps, and then with ordinary scissors clip away the superfluous part. In some cases, this is a simple matter; but in many, where the patient is timid, nervous or over-sensitive as regards manipulation about the fauces, it is very difficult to seize, or, if caught, to hold the organ while the scissors are applied, as any slight spasmodic movement will cause the forceps to miss or slip. Oftentimes, also, it being only required to remove one-eighth or one-fourth of an inch of the uvula, the forceps include more than this within the blades.

The scissors referred to in the mention of the case above, were made, at the suggestion of the writer, by W. F. Ford, of New York, and answer the purpose admirably. They are broad, answering for a tongue depressor, probe pointed, curved on the flat and cut on a semicircle, so that it is impossible for the uvula to escape when the blades are being closed. When applied, the points are touching each other, while a proper space is left at the centre of the blades. The tongue is depressed by inserting the instrument, and awaiting until the subsidence of the usual spasmodic action of the fauces and accompanying elevation of the uvula. The latter gradually descends into the space between the blades to the desired extent, and with one pressure of the handles the portion is removed. So much annoyance and suffering has been relieved by this little operation, that it has been thought worth while to remind the general practitioner of its frequent necessity.

Clinical Lecture.

ECCHYMOSIS OF THE EYE-BALL AS A SIGN OF FRACTURE OF THE BASE OF THE SKULL.

Part of a Clinical Lecture, delivered at the Massachusetts General Hospital, by R. M. Hodges, M.D.

The ease with which extravasated blood permeates the loose connective tissue of the eyelids and orbit is a familiar fact. The effort of coughing, of vomiting, or of lifting a heavy weight, often causes the rupture of a small vessel and consequent ecchymosis of the eyeball. A cachectic condition of health, or a slight obstruction in the circulation of the eye, is occasionally attended by a similar spontaneous occurrence.

Ecchymosis following injury, though it may be but an insignificant lesion, is sometimes an important symptom. When occurring in the lower eyelid, it has been regarded, by an authority no less than Velpeau, as evidence of a fracture of the base of the skull. Although this statement requires qualification, the phenomena of a " black eye" merit the attention which such a remark invites.

A traumatic extravasation of blood may take place (1) beneath the cutaneous surface of the eyelids, without involving the conjunctiva; or (2) beneath the ocular conjunctiva alone; finally, perhaps, extending to that of the eyelids, and to the integuments externally.

To understand this diversity, it must be remembered that the structure of the eyelids includes a strong aponeurotic expansion, inserted by its larger circumference into the entire border of the orbital cavity, while, by its smaller circumference, it is intimately connected with the tarsal cartilages, which are thus prolonged, as it were, to the very edge of the orbit. This diaphragm separates the connective tissue inside and within the orbit, from the connective tissue outside, which is continuous with that of the temple, forehead and face. It should also be borne in mind that the integuments of the forehead and scalp are closely united to the occipito-frontalis muscle, while the muscle itself is very loosely attached to the pericranium beneath. If a blow on the forehead occasions an extravasation of blood between the skin and the occipito-frontalis, it remains a circumscribed, discolored swelling, which is prevented by the density of the subcutaneous connective tissue from spreading beyond certain narrow limits. Instances of a defined intumescence, following slight bruises in this region, are common, and are described by the expressive name of "bumps." But when a contusion, in front of a line over the vertex from ear to ear, ruptures the muscular or pericranial vessels, the infiltration of effused blood is promoted by every movement of the occipito-frontalis muscle, the loose connective tissue offering little resistance; and the ecchymosis gravitates, first, to the base of the forehead, then into the upper eyelid, and, finally, to the lower. If the injury has occurred near the median line of the forehead, both eyelids may participate in the subsequent discoloration, and with a distinctness proportionate to the size of the vessels ruptured, the amount of blood poured out, and the distance it has to travel. This infiltration invariably limits itself to the external and subcutaneous parts of the eyelids; the aponeurosis described preventing its penetration inwards. No trace of it is ever found in the ocular conjunctiva. In some instances, blood traverses a long interval to reach the integument of the eyelids, and, when it does, a yellow tint of the skin precedes, sometimes by three or four days, the final "black and blue" stain. If extravasation is accompanied by an open wound, ecchymosis may not take place, for the blood will escape externally, unless prevented by the dressings applied; and the same may be the case if the patient lies on his back in bed, the ecchymosis gravitating backwards, and the eyelids remaining intact.

Such is the mechanism by which ecchymosis of the eyelids takes place, without participation by the ocular or palpebral conjunctiva.

If, on the other hand, the ocular conjunctiva is the seat of a traumatic ecchymosis, either (1) the globe of the eye has received a direct contusion, or (2) an escape of blood has occurred within the orbital cavity. The first event, exceedingly frequent, may be the result of a great variety of accidents, such as falls against an angle of furniture, or blows from a fist; and a diagnosis of the kind of injury can sometimes be made from the character of the ecchymosis. In a fall on the ground, for instance, the nose, the orbital ridge, and the malar bone, effectually protect the globe of the eye from a direct blow, and the ensuing ecchymosis should be confined to the cutaneous parts of the eyelids. Legal medicine may avail itself of this fact, not as conclusive evidence, but as corroborative of other information. In the second variety, where the escape of blood has occurred within the orbital cavity, an ecchymosis of the ocular conjunctiva may be due to a fracture, either in the bones of the orbit, or at some remote point in the base of the skull; in the latter case the blood reaches the orbit along the course of the nerves and through their foramina. The hæmorrhage may be abundant enough to cause protrusion of the eye-ball; or a traumatic aneurism may take its rise from a ruptured ophthalmic artery. It is more commonly the case, however, that a small extravasation occurs, and this, finding its way through the loose connective tissue filling the orbital cavity, shows beneath the conjunctiva of the globe as a dark-red spot. The external surface of the eyelid, separated from the extravasation by the aponeurotic diaphragm, does not become ecchymosed, unless the blood, effused in considerable quantity, after first invading the palpebral conjunctiva, slowly filters through into the subcutaneous connective tissue. In such a case, the integument of the lower eyelid will ordinarily reveal its presence before the upper; and many hours will elapse, after the stain of the ocular conjunctiva, before the lids are involved.

The practical bearing of these anatomical points is illustrated by the case of a fireman, in Ward 32, who, on the 27th of February, fell sixty feet from a ladder, striking on his feet. His thigh was broken, and his lower and upper jaws were fractured by the ladder, which fell upon him. Carried immediately to the Police-station, the globe of his right eye was noticed to be ecchymosed at its lower and outer part. The next morning, and not till then, the external parts about his lower right eyelid became "black and blue," and subsequently those of the lower eyelid of his left eye, and of both upper eyelids. There was no excoriation, or mark of direct injury, upon any part of the face. Rallying from the shock of the accident, he remained drowsy, and sluggish of intellect, with a very slow, and occasionally intermitting pulse. His right pupil was dilated to twice the size of the left, and he had double vision when both eyes were used. On the 11th of March, he complained of deafness, and a serous discharge began to flow from the left ear, which still continued on the 26th. These various symptoms were pronounced attributable to a fracture of the base of the skull, from indirect cause, viz., a fall upon the feet; the suddenly arrested descent inflicting a blow, through the intermedium of the vertebral column, sufficient to produce the injury. Or, a force, transmitted through the condyle of the lower jaw, may have broken the glenoid cavity of the temporal bone. Or, the fracture of the upper jaw may have extended upward to the ethmoid, sphenoid or temporal bones. In arriving at this conclusion, the ecchymosis of the eyeball was by no means the least important item of evidence.

In 1865, a somewhat similar case, as regards ecchymosis, was the subject of a clinical lecture in this hospital. The detailed records have not been preserved, but the patient was a young girl, who was struck on the top of the head by an iron stove, which fell down a "hoisting way," fracturing her skull. The subsequent removal of a large necrosed sequestrum revealed a fissure extending into the orbit through the frontal bone. In this instance, both eyelids and eyeball were ecchymosed.

In 1852, the notes were made in Paris of a case in which a fracture of the upper part of the orbit, attended by ecchymosis of the eyeball and upper eyelid, occurred in a woman killed by being run over. It was then supposed that time enough had not elapsed before death to implicate the lower eyelid, but since that time other cases have been observed in which the upper lid was alone the seat of discoloration.

It is not to be inferred that fractures of this region never happen without ecchymosis of the eyeball. In twenty-three cases of fracture of the base involving the orbit, observed at St. George's Hospital, London, no suspicion of the injury was derived from the peculiarity of the ecchymosis in five, while it was entirely wanting in eight. But in ten instances, the nature of the injury was made manifest by the blood effused under the ocular conjunctiva. The symptom has, therefore, a decided diagnostic value.

The generalizations which these statements appear to authorize, are:

1. That an effusion of blood beneath the integuments of the skull, if it does not gravitate backwards, often produces an ecchymosis in the cutaneous surface of the eyelids, but never of the conjunctiva of the lids or globe.

2. That a blow directly upon the eyeball may give rise to an ecchymosis of the conjunctiva, both of the globe and lids.

3. That when fracture of the base of the skull is indicated by ecchymosis, this ecchymosis appears first beneath the conjunctiva of the globe, then beneath the palpebral conjunctiva, and only subsequently in the integument of the eyelids, if at all.

4. That when the injury has been such as to make a fracture probable, external ecchymosis of the lower lid, and less frequently of the upper lid, is a significant symptom, only when it accompanies ecchymosis of the globe, or follows it, after an interval.

Progress in Medicine.

REPORT ON PATHOLOGY AND PATHOLOGICAL ANATOMY.*

By R. H. Fitz, M.D. Harv.

General Pathology.

Diagnosis of Cancer.—Neftel publishes a paper (*Brown-Séquard's Archives*, February, 1873) wherein he agrees with many other observers in regarding malignant tumors as primarily local. He seems rather absolute in stating that primary cancer of the lungs and kidneys never occurs. The main purport of his paper is to show that the urine in cases of cancer of the liver contains large amounts of indican, the presence of which "in large quantities, in persons affected with malignant tumors, I consider as pathognomonic of carcinoma of the liver."

He supports this view by a summary of three cases, in two of which the diagnosis was confirmed by the autopsy; the third case was one of recurrent cancer of the breast.

In 1863, Hoppe-Seyler (*Virch. Arch.*, vol. 27, p. 388) ascertained the presence of a large amount of indican in a case of melanotic cancer of the orbit, and it occurred to him that it was not improbable that the dark color of the urine observed by Eiselt in 1858, regarded as pathognomonic of melanotic cancer, might be due to the increased amount of indican. A more critical examination satisfied him that such was not the case. The dark color was present in other specimens of urine from cases of melanotic cancer, and the possibility of a connection between this and the disease was not denied; at the same time, the dark color is not indican.

Jaffe (*Centrbl.*, 1872, Nos. 31 and 32) finds indican increased in all diseases accompanied by intestinal obstruction, purulent peritonitis, certain forms of diarrhœa, and in various diseases where the latter existed as a symptom.

Rosenstirn (*Virch. Arch.*, vol. 56, p. 27) finds indican increased eleven to twelve times the normal amount in Addison's disease, numerous quantitative analyses having been made. With such evidence, it must be difficult to make the increased presence of indican in the urine pathognomonic of any one disease.

Infection.—The matter of infection and infectious diseases still remains prominent in the minds of many investigators. Continued attempts to solve this problem by way of experiment are presented, though the results of these experiments are insufficient to decide the question. Facts are furnished, however, which will make the pathway more clear for those who follow.

The point has often been raised that in the blood of healthy persons spores are found, hence their presence in the blood of diseased individuals cannot be so very remarkable.

Klebs, at the August meeting of the German Naturalists, 1872, gave the results of some investigations with reference to this matter (*Allg. Med. Cent. Zeit.*, Dec. 18, 1872). Glass tubes, closed at one end, were exposed for hours to a high temperature, the open end then fused. They were next introduced into the heart of living animals, one end broken off, and blood allowed to enter. Were the animals healthy, the blood formed a dark-red, opaque, crystalline pap, which remained unaltered for six months. The blood of animals into whom microsporon septicum had been injected also crystallized. When exposed to a temperature of 89·6° F., it liquefied, and was found to contain spores, single or united into masses. The report states, also, that "the distribution of the microsporon in sepsis, variola, and rinderpest, presents such characteristic differences that a specific distinction of them must be accepted."

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* Second semi-annual Report.

Reiss (*Reichert u. Du Bois-Reymond's Arch.*, 1872; *Centrbl.*, 1872, No. 55) examines the blood of living persons in case of disease. In scarlatina, minute round bodies are seen, strongly refracting light, in part isolated, in part joined together in chains, again lying in large groups and masses. Their nature is considered infectious, because inoculation of such blood produces the death of rabbits, in whose blood similar bodies were afterwards found. As will be seen later, the results of such experiments can hardly justify the conclusions. Other bodies were found in the blood of scarlatina and other exanthemata, typhoid, acute rheumatism, puerperal fever, pneumonia, &c., similar, as Reiss thinks, to those observed by Max Schultze, Hüter and Hallier. He finds them in greatest numbers during the retrogression of the disease; the more numerous, the greater the general anæmia and exhaustion. They were also found in various chronic diseases, accompanied with anæmia or cachexia. He regards them as derived from the retrograde metamorphosis of white blood corpuscles. Inoculation with blood containing them gave negative results.

Vogt (*Centrbl.*, 1872, No. 44) examined the fluids from joints, where metastatic inflammations had occurred, with reference to the presence of spores. The joint of the living person being punctured, and the fluid observed, innumerable monads, possessing lively vital movements, were found. The corresponding uninflamed joint, and the blood in general, contained but few of these. He could not find the rod-like bacteria seen by Klebs under similar circumstances, and is inclined to regard this observation as the result of faulty method. The patient having died, the moving monads could not be found after a lapse of twenty-four hours. Rabbits were inoculated with the fluid from the diseased joint; death occurred in eight days, and in the pus taken from the point of inoculation, also in the muscular fibrils, numerous monads were seen. Inoculation of the fluid from the healthy joint produced no result.

There being little or no opposition to the fact that the inoculation of certain fluids produces infection, and it being also granted that such fluids contain spores, it becomes desirable to ascertain whether the presence of spores in infectious fluids is essential. Zülzer, at a meeting of the Berlin Medical Society, November, 1872 (*Allg. Med. Centr. Zeit.*, 1873, No. 7), after repeatedly filtering vaccine lymph, was finally able to obtain a fluid almost entirely free from bacteria. Attempting to vaccinate with this, he found that its activity was lost.

Wolff (*Centrbl.*, 1873, pp. 114 and 130) could not entirely free a fluid from germs, either by filtering, freezing, or other methods. At the same time, he ascertained that putrid blood acts wholly different from its filtrate, even when bacteria are added to the latter. His inference is, that the active principle of the putrid blood must be some other morphological or chemical constituent than bacteria. The filtrate, in addition to relatively few bacteria, contained scarcely any odorous principle or sulphuretted hydrogen. He attempted to produce infection by the introduction of fluids containing bacteria and micrococci into the lungs. Twenty experiments were made, in eight of which disease of the lungs was found, apparently small broncho-pneumonic nodules, rarely lobular pneumonia, in the products of which large accumulations of micrococci were not found. Similar appearances were observed in animals who died from other causes, where the introduction of fungi could not be proven. Putrid alterations of the lungs, diphtheritis, miliary abscesses, containing colonies of bacteria, could not be produced by the introduction of fluids containing large amounts of fungi.

In the three other cases, where the bronchial mucous membrane was irritated previous to the introduction of the fungi, no alterations were found.

In some of the animals, an excretion of the fungi, by means of the kidneys, could be proven, though metastatic nodules could not be found in these or in other organs. In the lungs of the animals who died within six days, fungi were found to a slight extent; the lungs of those who lived six weeks contained either none at all, or very few.

In cases of infectious disease, it is well known that the lymphatic apparatus reacts more or less strongly. This is especially true of the spleen; in fact, the acute splenic tumor has been regarded as almost pathognomonic of infectious processes.

Birch-Hirschfeld *(Arch. d. Heilkunde*, 1872, p. 389) gives, as the results of experiments, that when moderate amounts of fluids containing micrococci are injected into the blood, the white blood corpuscles take them up in large numbers. After a while, probably depending on the amount injected, a progressive increase of the free cocci takes place until death occurs. In the pulp cells of the spleen, a part of the micrococci are retained, and when a large number are present, a distinct swelling of the organ occurs. If putrid fluids are injected into the serous cavities, a local inflammation results, and the animal may die before the micrococci enter the blood in large amounts; in such cases no splenic tumor is found. He has observed that in the septicæmic forms of puerperal fever, the appearances are similar to those occurring in animals in whose blood putrid fluids have been injected. Hence, where the patient dies with a splenic tumor, the infectious material must enter the circulation early; while, in the other series, the infection advances rather by way of the lymphatics, though both forms may occur.

A very interesting series of experiments have been made by Greveler and Hüter *(Centrbl.*, 1872, No. 49, and 1873, No. 5). Fluids containing monads having been injected into frogs, the mesentery, web, tongue and lungs were so prepared and placed under the microscope that the circulation could be observed. Many monads were found free in the blood, and bodies presenting the micro-chemical reaction of monads were found in the white blood corpuscles, especially in those which adhered to the walls of the vessels. Adhesion is also observed when the mesentery is prepared in the manner of Cohnheim, without previous inoculation; such occurs only after an interval of several hours. In Hüter's experiments the change was immediately observed—

within four hours after the inoculation. In the course of twenty-four hours, the adhering blood corpuscles were so numerous that nearly one-half of the capillaries had become obstructed, were cut off from the presence of circulating blood. In some instances, the monads were found clinging to the wall, producing similar effects to those caused by the white blood corpuscles. The circulation elsewhere became delayed and incomplete; capillaries, small veins and arteries were thus affected. Hüter regards the presence of monads in the white blood corpuscles as the cause for their adhesion.

Muscular Fibre in Inflammation.—The appearances of muscle as affected by traumatic inflammation, were observed by Gussenbauer (*Arch. f, Klin. Chir.*, 1872, xiii.; *Centrbl.*, 1872, p. 779). Soon after the injury, a coagulation and frequent granular opacity of the contractile substance occurs. After twenty-four hours, numerous migratory corpuscles are found in the muscular interstices; also, vigorous proliferation of the muscular nuclei, especially in those parts which are coarsely granular. These enter the granular muscular substance, force the same apart, even separating real muscle-cells. These latter form spindle-shaped fibres with transverse striæ. The fibres at the two ends of the gap then grow towards one another. Hence, the regeneration of the muscular fibres proper proceeds from the original fibres, the granular degeneration of which in no way indicates destruction. From the migratory elements, and those produced from the perimysium, cicatricial tissue results, which fills up the wound, gradually diminishing in extent, never disappearing.

Fever.—At the close of Hüter's paper, referred to under the head of infection, the theory of a mechanical origin for fever is also advocated. Traube and Senator have already brought forward the views that the essence of fever is rather a diminished radiation than an increased production of heat. Traube supposes that the small arteries are contracted. Hüter sees that one-half the vessels, where observed, are cut off from circulating blood. This would account for an increased retention of heat. The chill and sudden elevation of temperature result from the sudden obstruction. The increased pulse may be due to the heat of the blood (Senator); perhaps, also, to increased opposition in the peripheral vessels. Death may be explained by the insufficiency of the heart, or by the obliteration of numerous vessels of the nervous centres of respiration and circulation, or through both causes. The fever would not necessarily demand a pre-existing chemical blood-poisoning (Weber, Billroth). The theory is regarded as explaining metastatic inflammation in the simplest manner; in addition to the diminished radiation, however, increased production may take place.

Senator (*Centrbl.*, 1873, No. 5) endeavors to determine the condition of the vessels during the hot stage of fever, whether it be dilatation, permanent or periodical contraction. The ear of white rabbits was made use of. A pyrogenous material, sputum with glycerine, in which are but few if any micrococci, was injected. There followed remitting increase of temperature, with but slight disturbance of the general condition. Some time after the injection, when the temperature is increased, the auricular vessels are often contracted for hours. From time to time, intermitting dilatations and contractions occur, in duration and degree apparently exceeding the rhythmical movements of the vessels of healthy rabbits. "Through these observations is, for the first time, direct proof furnished that neither a paralysis nor a permanent tetanus of the vessels exists in the heat of fever."

Hæmoglobin in Disease.—Quincke (*Virch. Arch.*, vol. 54; *Prag. Viertjhrschr.*, vol. 115) has found* the hæmoglobin of the blood to be diminished to a third in cases of chlorosis and leucæmia. In five cases of nephritis in all stages, it was considerably diminished. From the latter fact, he infers that in albuminuria, the blood corpuscles take part as well as the serum. In two cases of diabetes mellitus, there was no diminution. The same resulted in a slight case of scurvy, but in another, where repeated attacks of nasal hæmorrhage had occurred, the reverse was found. In typhoid, recurrent fever, and cerebro-spinal meningitis, he observed slight changes. In pyæmia, after three weeks' duration, a notable diminution. In a case of phosphorus poisoning, despite a considerable disturbance of tissue metamorphosis, there was no change.

Jaundice.—At the meeting of the German Naturalists in 1872, Vogel speaks of the cause of icterus (*Allg. Med. Cent. Zeit.*, 1872, p. 877). He confirms Naunyn's observation that bile acids occur in all urine, hence considers that this argument for a hæmatogenous jaundice falls to the ground. In the icterus said to follow the use of chloroform, he thinks that the influence of mental action is neglected, and in several instances a gastric catarrh is known to follow, which might readily give rise to the symptom. He also contends against the idea of a catarrhal origin, it being questionable whether the symptoms are not rather the result of interrupted bile-secretion than the cause. The occurrence of jaundice previous to the gastric symptoms favors this doubt. He knows of no experiments on animals where the bile-ducts have been simply irritated, not permanently closed. His remarks seem to favor more particularly the view of a nervous origin.

(To be concluded.)

ICTERUS NEONATORUM.—Dr. F. A. Kehrer, of Giessen, publishes, in the *Oest. Jahrbuch. für Paediatrik* (II. B., 1871), a lengthy and valuable contribution to our knowledge of this subject. Dissenting from the views of Frerichs, Heidenhain and Virchow, he gives the following as the causes of icterus in new-born children.

1. Congenital contraction of the gall duct.
2. Abnormal secretion of the mucous glands of the gall bladder (Henle's glands).
3. Insufficient contraction of the ductus choledochus.

The icterus begins usually on the second or third day after birth; rarely on the first, fourth or following days. In one hundred and eight out of three hundred and ninety cases, the icterus has disappeared in the course of five days. In the greater number of instances, it passes off in six to twelve days, while some cases last from two to four weeks. A relapse is now and then seen.

A favorable prognosis can, therefore, be given, even in the most severe cases. Writers who have been inclined to regard this disease as a serious one, base their opinions upon the cases of children who were erroneously supposed to have died of icterus, but who, in reality, succumbed to some other complaint.

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* By means of the colorimetric method of Preyer.

Bibliographical Notices.

The Practice of Surgery. By Thomas Bryant, F.R.C.S., Surgeon to Guy's Hospital. With 507 Illustrations. Philadelphia: Henry C. Lea. 1873. Pp. 284.

Mr. Thomas Bryant, now for many years past surgeon to Guy's Hospital, has given us one of the best treatises on practical surgery ever published; indeed, we doubt if at the present day a more original work on this subject could be written. His own clinical experience furnishes the basis for most of his conclusions, and the rules which he lays down are clear, well defined and sensible. The materials in the wards of the hospital and in the museum have been freely used. One of the most striking excellences of the book is the abundance, originality and excellence of the illustrations. There are over five hundred, and almost all new; some of them are from drawings of cases, others from specimens in the museum, and others illustrate modes of surgical procedure or operation. The introductory chapter is one of the best, and is mainly on the subject of diagnosis, the correct making of which is the foundation for a cure. A conclusion must be reached by a process of elimination, every probability being considered and weighed; a diagnosis framed on probabilities is considered very hazardous, though occasionally brilliant. The "Points for Observation in Surgical Cases," appended to the introductory chapter, will be found to be very valuable, inasmuch as method in investigation is much more satisfactory and certain than irregular examination and hap-hazard questioning. Figure I., illustrating the repair of a wound by granulation, is from an excellent microscopical section by Mr. Howse, and is a specimen of what an illustration should be. Injuries of the head follow after several chapters on repair, inflammation, traumatic fever, pyæmia, &c.; they are well described, and are made clear by drawings from specimens in the Museum of Guy's. Seventeen "General Conclusions" complete the chapter on the "Treatment of Head Injuries," and are as valuable for reference as the "Points for Observation" mentioned above. We are glad to see that the writer advocates the use of the noose in the removal of nasal polypi; had he gone further, however, and advised the use of the illuminating mirror, also, we should have been better pleased. How much more scientific and intelligent it is to illuminate the nasal cavity with direct or reflected light and place the loop of a wire snare round the base of a polypus, than to grab in the dark with a pair of forceps, and sometimes get the polypus and sometimes more or less of a turbinated bone! Mr. Bryant also mentions that "Dr. Thudicum successfully employs the wire snare; but instead of tearing away the growth, he cuts it off, heating the wire with the galvanic cautery." We are aware that the snare may sometimes be superseded by the forceps, but the former mode is more intelligent, infinitely less painful, and should be adopted if possible.

It is surprising that the author does not mention the operation of displacing the upper jaw in part, in order to get at a growth in the posterior nares; this brilliant operation, which has been so successfully performed here by Drs. Hodges and Cheever, and is, so far as the writer knows, original with Langenbeck, should have found a place in any modern work on surgery. Surgical affections of the larynx and trachea are treated at length; a description of the laryngoscope and of the mode of using it is given. The "horse-hair probang," for removing foreign bodies from the œsophagus, is mentioned and figured. This is one of the most ingenious and effective instruments we have, and it would be interesting to know who was its originator. We do not notice that the subcutaneous injection of morphia in abdominal injuries is suggested, though the administration of opium is insisted on. The magical relief given by the injection of half a grain or grain of morphia in intense abdominal pain caused by a severe blow, makes such an impression that a surgeon would hardly forget to mention this mode of treatment, if he had ever seen it. Besides, in these cases, there is often persistent vomiting, and opium by the mouth is of little service. Next to the discovery of anæsthetics, that of the subcutaneous injection of morphia is the greatest triumph of modern therapeutics. The pneumatic aspirator is described and figured, and is considered a valuable aid to diagnosis.

In regard to the operation for the radical cure of hernia, Mr. Bryant says:—"For my own part, I believe that where a hernia can be kept up by a truss, and the patient is likely to remain in a civilized country where trusses can be obtained, any operation for the radical cure is an unjustifiable one; to risk the life of the patient on the theory of a cure, with the probability that the patient will be less liable to its descent, when a truss has to be worn subsequent to the operation as a matter of safety, is a practical delusion." This is good common sense and sound surgery. Mr. Wood's operation is described carefully and at length, and his drawing illustrating it is reproduced.

The directions for treating the various kinds of wounds are clear, and are illustrated by wood-cuts. For instance, Fig. 194, "How to do it," and "How not to do it," shows the right and the wrong way of sewing up an incised wound. Skin grafting is described and advocated in a chapter of four pages, and, like all the other methods mentioned in the work, is well illustrated. The chapter on stricture of the urethra and its treatment is a very able and original one, and will repay perusal. We cannot, however, agree with Mr. Bryant in considering Mr. Cock's operation "as *the* operation for external urethrotomy without a staff." (The italics are our own.) To describe Cock's operation at length, would take too much space; briefly, it consists in plunging a knife through the perineum into the urethra at the apex of the prostate, the guides being the median line and the tip of the finger in the rectum; the wound is to be made by a single stab. The cases must be very rare where a patient dissection and division of the stricture in the perineum is not more scientific, intelligent and humane, or where tapping through the rectum, or, with the pneumatic aspirator, over the pubes, would not be preferable. But the reader must go through this chapter patiently, and he will find much instruction and entertainment in it.

Tumors are divided into innocent, semi-malignant or recurrent, and malignant, and these again are described structurally. The chapter on the microscopical anatomy of tumors is written by Dr. Moxon, and contains a great deal of valuable information in a condensed form; the illustrations are excellent. In the chapter on dislocations of the lower extremities, Prof. Bigelow's treatise on the Hip is, of course, referred to, and the Y ligament is figured. The chapters on diseases of the joints will well repay careful study. In the chapter on anæsthetics, the many valuable aids given by them in diagnosis, are enumerated, the great relief to the operator and patient in all plastic operations, the more certain cures in vesico-vaginal fistula, the ease with which dislocations are reduced, and many other advantages are mentioned. The author thinks highly of a mixture of alcohol, ether and chloroform. Here, we should leave out the first and last ingredients, and use ether alone, as being perfectly safe, satisfactory, and the best anæsthetic known.

On the whole, we are ready to repeat our first statement, that Mr. Bryant has given us one of the best treatises on practical surgery ever published, and think that the student could not have a much better book for instruction nor the surgeon for reference. J. H.

Club-Foot: Its Causes, Pathology and Treatment. Being the Essay to which the Jacksonian Prize for 1864, *given by the Royal College of Surgeons, was awarded.* By William Adams, F.R.C.S. Second Edition. Pp. 464. Philadelphia: Lindsay & Blakiston. 1873.

This interesting book may be said to maintain a position as a classical work on the subject of which it treats, and, in addition to its scientific value, possesses the advantage of being published in an exceedingly attractive form. It has gained the dignity of a second edition, and, indeed, bids fair to run through a number of editions, for it will probably be long before any work of equal merit or of so exhaustive a character will be presented to the profession. In addition to a general revision of the book, we find an exceedingly interesting chapter on the reunion of tendons after subcutaneous tenotomy, the greater part of which has been added to the essay in this edition. Illustrating the pathological changes described in this chapter are a number of plates, showing the changes visible to the naked eye in tendons at various periods after tenotomy, together with the histological appearances observed in the reparative process. According to Mr. Adams, the exact nature of the process by which the union of tendon takes place has long remained a matter of uncertainty, the point at issue being "whether the new material formed for the purpose of reuniting the cut extremities of the tendon remains a permanent tissue, forming an integral part of the tendon and thus producing the required elongation." It seems that Hunter, who happened to rupture his tendo-achillis whilst dancing, was one of the first to study the method of repair, and some of the specimens procured by his experiment are still preserved in the College of Surgeons; since his time a large number of similar experiments have been performed, but the views of the various observers have differed widely on the part played by the effused blood, the so-called inflammatory lymph, and particularly the sheath of the tendon in the reparative process. Mr. Tamplin, Stromeyer and others, believe that the new material formed between the divided ends of the tendon is provisional merely, and subsequently contracts to a linear cicatrix or disappears entirely, the elongation being obtained at the cost of the contractility of the muscle. Mr. Adams's views on this point, as on others connected with this subject, have been based upon the results of fifteen *post-mortem* examinations, on persons operated upon for club-foot, made at periods varying from four days to three years after operation, and also upon numerous experiments upon animals. Although the separation of the ends of the tendon may be sometimes very great, they are still connected by the sheath, which is not materially injured by the operation, or by the loose connective tissue which takes its place. A small amount of blood is effused, which, however, has little to do with the process of repair; indeed, according to Mr. Adams, if the effused blood be sufficient to fill the sheath and the surrounding tissues, the process will be materially interfered with. We are inclined to doubt the correctness of this statement, for it is well known how readily extensive clots are disposed of which interfere in no way with the cell-formations going on in and about them. The next change which we find, according to Mr. Adams, is the appearance of "a blastematous material, in which the cell-forms do not pass, in development, beyond the stage of nuclei." This, he says, is the proper reparative material from which new tendon is developed, and is furnished by the sheath. We confess to being somewhat startled to see such expressions as that used above, in regard to the cell-formation, in a book bearing the date of 1873. *Mais c'est un detail*, and we refrain from further criticisms of Mr. Adams's account of histological processes, for fear of incurring the scorn of our gentle reader, the so-called practical surgeon. Suffice it to say that the material alluded to eventually becomes tendon, or something very nearly like it, both microscopically and macroscopically. The ends of the old tendon at this time are found to be separated into bundles of fibres, between which the new material insinuates itself in such a manner as to produce a dove-tailing of the new structure with the old. This new tissue does not contract, as before described, but is a permanent one, and is occasionally of considerable length—the greatest seen by Mr. Adams being two and a quarter inches. To the naked eye, this new tendon presents a grayish, translucent appearance, by which it is readily distinguished from the old. This appearance, however, cannot be observed after preservation in alcohol and other fluids, and hence the errors of former observers. The last change which takes place is the formation of a separate sheath, which is effected in a more or less complete manner. There is generally a fibrous band uniting the tendon to the sheath at some point, even in the best cases, but it is not short enough to interfere with the play of the tendon.

Mr. Adams is of the opinion that non-union of tendon may occur, but it is exceedingly rare. In regard to extension, he says this should be gradual and not immediate, the object being not to stretch the new material, but rather to regulate its length. All the changes above described are shown in the series of plates alluded to, which add greatly, in our opinion, to the value of the work. Those giving the microscopical appearances are not quite up to the standard that we should like to see in a book of this kind, but perhaps are as good as we are likely to see in English or American surgical works for some time to come. The practical part of the work leaves little to be desired; the illustrations are finely executed, and, though quite numerous, could none of them be easily omitted, serving, as they do, in every case, to make clear some instructive point.

We have seen few surgical monographs that are equal in completeness and high merit to this one. W.

Boston Medical and Surgical Journal.

Boston: Thursday, April 17, 1873.

"Baseball is a healthful exercise." "Baseball is not a healthful exercise." Such, as reported, is the conflicting evidence of witnesses before a committee of the City Government on a petition of baseballists that a part of Boston Common be again surrendered to them for baseball purposes. Had we been called on to offer an opinion on this subject, we should have been disposed to ask whom the inquiry concerned; whether the so-called baseball "nines," or the "three thousand spectators," who stand like statues from 2 o'clock to 6 P.M. in the bleak winds of early spring. If beneficial to some of the "nines," it must be productive, at this season of colds and rheumatism, to the "three thousand," while at no season of the year does it afford them any healthful exercise whatever.

The boys' game with which the associations of many of the present generation are connected, bears the same relation to modern adult baseball, that an exhilarating horseback ride in the country has to the performances at a race-course, whether of daily training, or of long-anticipated matches by professionals, upon which large sums of money are staked. And the crowds are of much the same heterogeneous sort, being mostly composed of persons having little regular occupation, of all ages, and not always the most profitable associates for boys. Boston Common is now wanted for these spectacles; and for similar exhibitions by amateur clubs of men, to whom it is naturally agreeable to disport themselves before admiring thousands.

The fact seems to be that when a city becomes so large that a surrender for special purposes, of any of its open breathing-places, vitiates the air by dust (especially if it interferes with public travel, or, indeed, with the comfort or enjoyment of the community at large), such monopolies must give way to the advantage of the whole. It has long ago been settled that in such vacant spaces of large cities, green lawns protected by law are conducive to the greatest health and the greatest convenience of the greatest number. In the immense city of New York, for example, the City Hall Park, Tompkins Square and the Battery, which, but a short time ago, had become arid fields of dirt and dust, have been now laid down to grass with intersecting paths, to which travel is confined. We believe it to be only a question of time how soon our little Common will be more cultivated, its soil enriched, its hills terraced, the flats intersected by paths, ornamental as well as useful, with abundant and shaded seats, where the tired artisan may enjoy his pipe, or the weary sewing girl her book, breathing air free from dust, and feasting their eyes upon a luxuriant vegetation. One thing is certain; you cannot tread out your grass and have it too.

The Berlin correspondent of the *London Daily Times* writes as follows concerning public improvements in the Prussian capital:—

At last the Augean stables of Berlin are to be cleansed. After an interminable discussion of nearly ten years, the Town Council, a few days ago, made up its mind and voted the canalization of the capital. We thus have the prospect of being ultimately delivered from a nuisance which, of the many inconveniences occasioned by the rapid growth of this metropolis, was the gravest and the one most generally felt. That the decision has been so long delayed was owing, not to any indifference on the part of the inhabitants to the primary conditions of health; it, on the contrary, arose from the peculiar difficulties attaching to the question in this town and the universal interest it excited. If the drainage question is far from being satisfactorily solved in any large capital, it is specially complicated in Berlin, a city situate on a dead level, with only a couple of small rivers in its neighborhood, and at a long distance from the sea. It must be admitted the matter was sufficiently hard to deal with to allow of very diverse opinions being advanced with some show of right, and as the professional men of this country combine the scholar with the engineer, you may be sure they did not permit the opportunity to escape them unimproved. The learning they displayed in handling the matter, the ardor they showed in the course of the debate, and the hubbub they raised with all their writings, meetings and petitionings, instead of accelerating a decision only served to delay it indefinitely. At one time, it so bewildered the members of the corporation as to render it an apparently hopeless case. On the one hand, there was the cartage party stoutly contending that canalization had answered nowhere, and that it would do so least of all at Berlin; that the gigantic problem of removing refuse matter was as far as ever from a scientific settlement, and that this city, not being able to compete with London in riches, should not presume to imitate it in an expensive and doubtful experiment. In the Berlin climate, we were further told that to protect the pipes against the frost, they would have to be sunk so deep as to increase considerably the cost of the works. Again, steam-engines would have to be employed to keep the contents of the pipes flowing and to pump them up again outside the town; and what was to be done with the odorous fluid when it got there? The Spree and the Havel had not water enough to burden them with an ocean of dirt. Had not Berlin become so pestilent because the new parts of the town—the parts erected within the last fifteen years—had been permitted to discharge a portion of their filth into the public water-courses, while the rest of the capital now, as formerly, adhered to cartage *pur et simple?* And was now all the precious manure of the place to be thrown away merely to render the environs uninhabitable, if, indeed, the town could, by canalization, be freed at all from the annoyance? Much better adopt an improved cartage system, on the Paris model. These arguments were met by the Canalisateurs proudly pointing to the meadows irrigated by sewerage in various places in England and Germany. If, these asserted, the obnoxious liquid were carried off by pipes radiating from the centre of the capital there would be no difficulty whatever in applying any possible quantity to the formation of artificial meadows. The sandy soil of the country all around would absorb any amount of the nourishing moisture, and make the land produce enormous quantities of delicious grass where now only a few scanty potatoes reared their sickly leaves out of the sandy wilderness. To prove the accuracy of their assertions, the Canalisateurs so far prevailed upon the municipal authorities as to induce them to make a few experimental meadows of the sort recommended by them. But even this did not settle the controversy; for if the Canalisateurs were in raptures with the quality of the crop produced, and offered to eat it themselves, the champions of the night cart were as loud in proclaiming the opposite, and had terrible stories to relate about the decline and fall of imprudent quadrupeds who had been rash enough to munch the municipal grass. At last the Town Council, being at their wits' ends, yet recognizing the necessity of doing something, determined to leave the decision practically to a single man, of known competence and integrity. Accordingly, Prof. Virchow, the great physiologist, and a member of the Council, was commissioned to draw up a report which should contain an account of the various opinions advanced, with a summary of the conclusions he had arrived at. The Professor required rather more than a year to finish his report, but when he did so the controversy was at an end. Reviewing with consummate skill the various systems proposed, and having due regard to the reports of previous municipal committees despatched to London, Paris, Antwerp, &c., the Professor wound up by giving his verdict in favor of canalization. Fortunately, the municipal elections, being close at hand, gave his party the majority in the Council, and enabled it to defeat the opposition by a decisive vote a few days ago. It deserves, however, to be mentioned that, in deference to the opinion of the minority, every house owner will be left the option of either connecting his property with the canals or adhering to cartage, which is to be entirely reorganized on a deodorizing system. The liberality of this concession was the more advisable as it is to be foreseen that few proprietors will cling to the latter method when the advantages of the former are once placed within their reach. The works will probably begin at an early date, the cost being estimated at rather above two million pounds. As to the water-courses of the Thier Garten, so offensive last summer as to render that beautiful park absolutely unapproachable, they were refreshed in the autumn by a continuous stream of fresh water poured into them at various points. If Berlin has been thus tardy in undertaking these necessary works, she may still indulge the scientific boast that it is to the erudite investigation of the subject she has sacrificed so long nose and health before coming to a conclusion. I verily believe that the books, pamphlets, speeches, leading articles, and reports which have appeared in print on the savory topic would be sufficient to fill a library. Of course, it may be questioned whether this is a sufficient compensation for the 39 annual deaths for every thousand inhabitants Berlin has lately shown, against the 19 she had only fifteen years ago, and the 24 London has now.

Positions for Catheterism.—Mr. Teevan, Surgeon to West London and St. Peter's Hospitals, says, in *London Lancet,* Feb. 15th, 1873, that the sitting position is best for the surgeon and the standing best for the patient. The following are some of his reasons:—

"However prolonged the operation may be, the surgeon will not become fatigued; . . . . it is the one position in which he enjoys the maximum amount of mobility with the minimum of power, and is therefore the one position in which he is least likely to make a false passage. . . . . If the surgeon adopts the sitting position, I feel convinced that he will, in the long run, prove a far more successful operator than one who stands, and that he will often succeed where the latter has failed."

In the patient "what we desire is fixity, and we shall best achieve this object by placing him upright against the wall, and stretching his penis horizontally forwards. So situated, we have at last obtained all that can be desired; for the urethra, instrument, and direction of force are all in the same horizontal and vertical plane, and our axis of vision will nearly correspond. Thus, therefore, we shall be able to impress on the point of the catheter, when lost to view, any direction we may desire it to seek, and our operation will no longer be an exhibition of blind and unguided force, but a successful demonstration of applied skill."

Correspondence.

The Great Charity.

Messrs. Editors,—Permit me to call attention to "The Great Charity," as it is termed in this city, by the Quaker philanthropist, John Hopkins. First, to my editorial of March 14th, clipped from the *Baltimore American* of that date:—

Mr. John Hopkins's contribution of something more than four millions of dollars to build and endow a free hospital in Baltimore, places his name before the world in company with those of Peabody, Miss Burdett Coutts, Peter Cooper, Stewart, Girard, the Warrens of Boston, McDonough, and others who have made use of their wealth for the benefit of humanity. His plan is as practical as its inspiration was honorable. To donate his fortune while he was yet alive and able to oversee the use of it, in connection with a trusted Directory, is to accomplish his purpose to the best advantage of the institution, and to avoid the legal entanglements and post-mortem trials which are a common sequel to similar legacies. Moreover, Mr. Hopkins makes a good use of his means when he unites his splendid hospital of four or five hundred beds with the Medical Department of the University, thus supplying a deficiency in opportunities for medical training that has heretofore been prominent in Baltimore, and of which we spoke a few days since. Probably these increased advantages will draw to Baltimore five hundred students from other sections of the country, who would, of course, contribute to the wealth and trade of the city. The medical book trade, the drug trade, and the manufacture of instruments, will receive an impetus from them.

The design of Mr. Hopkins to connect his hospital and university ought to be an argument in favor of at once throwing open the hospitals of the city to the medical students, in imitation of London's St. George's, St. Thomas', or St. Bartholomew's, or New York's Bellevue, one of the foremost medical schools of the time.

The feature of educating nurses, too, is wise and correct; a necessity of long standing in this country and causing much suffering and many mishaps.

Mr. Hopkins certainly deserves credit for his great forethought and correct study of the demands of his charitable institution. And in this connection the female medical student is brought before us, and we must be frank and ready to acknowledge her mission all over the wide world. For a long time it was a mooted question by the savans at large whether or not they should face public sentiment and admit women to the studies of the healing art. Now it is no longer a query. Home and abroad her demands are heard, and she is freely admitted as a student on equal terms with the other sex. In the delicate diseases of her sex, she is fast becoming mistress of the position.

Mr. Hopkins, also, in his characteristic letter, alludes to a desire—a very reasonable and happy one, too—that the hospital and other institutions which shall perpetuate his name should be an ornament as well as a benefit to Baltimore. This may be carried out in a measure with little or no extra expense, with the university and the grounds donated, but the day for stately buildings for hospital purposes has gone by. Their heavy walls collect the germs of malignant diseases and retain them for the coming inmates. They are difficult of ventilation and incapable of suitable divisions for the different classes of patients. "The ward plan," which consists of a building one story high and wide enough for two rows of beds and a centre aisle, is now adopted in all new structures of the character. They are susceptible of proper ventilation and of the most convenient arrangements for light, heat and water, and the removal of refuse matter. The wards can be disinfected rapidly, and all deleterious germs destroyed by chemical means. The isolation of different contagious diseases can only be perfected in such a structure.

This plan was introduced, some years ago, at De Camp General Hospital, on David's Island, New York Harbor, which, during the war, was the largest hospital in the world, containing some four thousand beds. Under the charge of Surgeon Warren Webster, it was considered the model Government hospital of the country. Among many others which have adopted this plan, we may mention the great St. George's Hospital on the Surrey side, in London, which has lately been endowed by the will of a wealthy citizen to the amount of £1,000,000 sterling. The institution covers over five acres of ground, and is built on the ward plan.

In conclusion, Messrs. Editors, let us notice the formation of the Epidemiological Society of Maryland, I think the only one of the kind in our country, and, perhaps, with one exception (Edinburgh, Scotland), the first in the world. This Society originated through our City Fathers appointing one hundred medical gentlemen to form a vaccination association. They have had several meetings, made or adopted a constitution and by-laws, and appointed committees on the various epidemics, as well as correspondence at home and abroad.

Baltimore, 4th month 9th, 1873. J. J. CALDWELL, M.D.

MESSRS. EDITORS,—On looking over the records of the Massachusetts Medical Society, I find that their early meetings were held at the following places, viz.:—The Manufactory House; Stockholders' Room in the Bank; Mr. Furness's painting room in Court St.; hired room in Court St.; Concert Hall; James Vila's; Vila's Tavern; Franklin Hall; Boston Library; Hall of Massachusetts Medical Society; new building rear of the Athenæum, Pearl St.; Senate Chamber; Selectmen's Room.

Of some of the above there is of course no doubt. Concert Hall existed until within a few months. Franklin Hall and Boston Library were, perhaps, one and the same room in Arch St. The Hall of the Massachusetts Medical Society, where was it? The Senate Chamber we know. The Selectmen's Room—was it in the Old State House? The *new* building in the rear of the Athenæum in Pearl St., if not pulled down some years ago, was burned down this last fall. Where were the other points? Can any one inform an

INQUIRER.

Medical Miscellany.

AT a late meeting of the Obstetrical Society of London, Drs. Fordyce Barker and T. Gaillard Thomas, of New York, were elected Honorary Fellows of the Society.

A FAIR for the benefit of the Carney Hospital opened at the Music Hall, on Monday, and will continue two weeks. The professional staff and the management of the hospital are excellent, the building is good, and its situation is finer than that of any other in the city. Though the institution does much good, the want of money prevents its advantages from bearing as much fruit as they should and will bear if the fair does as well as its object deserves.

TRICHINOUS PORK.—In the course of a recent discussion on trichinosis in the Medical Society of Magdeburg, twenty-six physicians who were present stated that they had under their care at the time a hundred of the inhabitants of the town, who had purchased pork containing trichinæ from the same slaughter-house within the same week, and had eaten it nearly raw.—*British Medical Journal.*

CRIMINAL CHLOROFORMIZATION.—"*En France on est moins credule*"—they don't believe English and American stories of violations and robberies committed on persons chloroformed "in the most unconscious and surreptitious manner."

The Medico-Legal Society, according to the *Jour. de Med. et Chir. Prat.* for March, 1873, proved, by a series of experiments, that a person already in natural sleep is awakened by the slightest inhalation of chloroform; and, when awake, chloroformic torpor cannot take place without being accompanied by a kind of anguish, similar to asphyxia, so aggressive as to render involuntary submission incredible.

In cases such as those referred to in England and America, chloroform has undoubtedly duped some one; but that some one is the public!

A LEARNED MENU.—The following is the bill of fare of a banquet recently held at Munich on the celebration of the jubilee of the university:—

Gustatio.

Pisciculi oleo perfusi et salmones fumo siccati ad cibi
appetentiam excitandam.

Mensa prima.

Jus pingue testudinaceum carnali succo Liebigiano conditum.
Salmones Danubiani cum liquamine e bulbis rotundis
americanis.
Bovini lumbi assi, omnibus horti olitorii deliciis coronati.
Caro ferina inter fungos natans opere pistorio inclusa (vol-au-vent de gibier aux champignons).
Squillæ cum vitellis oleo et aceto in unum mixtis.
Pisa novella coctura Apiciana macerata.

Mensa Secunda.

Placenta major dulciaria opere tectorio sigillis aliisque
artificiis mirabilem in modum ornata.
Figura pueruli Monacensis conglaciata.
Frugum regionis glacialis genera varia botanicorum oculis et
studiis nunc primum proposita.
Vinum dulce Hispanicum, molle Silvestre, mite
Burdigalense, fortius Palatinum,
Spumans Campanum.

—*London Medical Record.*

NO MORE CAKES AND ALE—HE'S ONLY A PAUPER.—"We are sorry," says the London *Medical Times and Gazette*, "to observe that the medical officer of St. George's-in-the-East Workhouse, against the unanimous wish of the Guardians, is strenuously opposing what is in most workhouses a customary allowance of beer for paupers who work as tailors, shoemakers, &c., thus partially recouping the parish for their keep. It is difficult to conceive what valid objection the doctor can have against the very moderate allowance of beer customary in such cases. However, as the Poor-law Orders require the sanction of the medical officer to the bestowal of malt liquors, we suppose the working inmates will be deprived of their harmless luxury."

PRESERVATION OF FOOD.—At the meeting of January 27th, of the Academie des Sciences at Paris, M. Boussingault stated that he had preserved food since 1865 in a closed vessel under the action of a refrigerating mixture giving 20° below zero (Cent.). Soup and cane sugar had in this way been preserved from all change.

A REMEDY FOR INFLUENZA.—Dr. A. McLane Hamilton recommends the following mixture as effective in cutting short the influenza which is now prevailing so extensively:—

R. Acid. carbolic., min. x.;
Tinct. iodinii, }
Chloroform, } aa ʒij. M.

This mixture is to be volatilized by means of a test-tube and spirit lamp, and then inhaled by the patient, the inhalation being repeated every two or three hours. A violent fit of sneezing is said to be produced at first, which is afterwards succeeded by a diminution of the symptoms.—*The Medical Record*, March 1, 1873.

ANSWERS TO CORRESPONDENTS.

Dr. C. D. Homans is the Corresponding Secretary, and Dr. C. W. Swan the Recording Secretary of the Massachusetts Medical Society.

There is no chair of Electricity in the Harvard Medical School. Dr. J. J. Putnam is delivering a course of University lectures on the subject.—EDS.

MORTALITY IN MASSACHUSETTS.—*Deaths in seventeen Cities and Towns for the week ending April* 5, 1873.

Boston, 140—Charlestown, 12—Worcester, 13—Lowell, 23—Milford, 1—Chelsea, 7—Cambridge, 23—Salem, 15—Lawrence, 12—Springfield, 9—Lynn, 19—Gloucester, 7—Fitchburg, 7—Newburyport, 2—Somerville, 7—Fall River, 26—Haverhill, 11. Total, 334.

Prevalent Diseases.—Consumption, 42—cerebro-spinal disease, 31—pneumonia, 31—scarlet fever, 15.

Smallpox caused two deaths in Boston, one in Worcester, one in Lowell, and one in Gloucester. Cerebro-spinal disease caused fourteen deaths in Boston, six in Haverhill, three in Charlestown, two in Springfield, two in Lynn, and one in each of the following places:—Lowell, Chelsea, Cambridge and Lawrence.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, April 12th, 140. Males, 63; females, 77. Accident, 2—abscess, 1—apoplexy, 2—asthma, 1—inflammation of the bowels, 2—bronchitis, 6—inflammation of brain, 1—congestion of brain, 1—disease of brain, 11—burned, 1—cancer, 4—cholera infantum, 1—cerebro-spinal meningitis, 12—consumption, 22—convulsions, 6—croup, 2—cyanosis, 1—debility, 2—dropsy, 1—dropsy of the brain, 3—exhaustion, 1—exposure, 1—epilepsy, 1—erysipelas, 1—scarlet fever, 7—typhoid fever, 1—disease of the heart, 1—hæmorrhage, 2—intemperance, 1—disease of the kidneys, 2—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 14—marasmus, 5—mortification, 1—paralysis, 3—pleurisy, 1—premature birth, 2—peritonitis, 1—puerperal disease, 4—smallpox, 2—unknown, 3.

Under 5 years of age, 56—between 5 and 20 years, 12—between 20 and 40 years, 36—between 40 and 60 years, 21—over 60 years, 15. Born in the United States, 99—Ireland, 25—other places, 16.

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Original Communications.

SOME RECENT WORKS ON INTESTINAL OCCLUSION.

By W. O. Johnson, M.D. Harv.

I. *Statistics of Two Hundred and Fifty-eight Cases of Intestinal Occlusion, with Remarks.* By S. Foster Haven, Jr., M.D. Extracted from the American Journal of the Medical Sciences for October, 1855. Philadelphia. 1855. 8vo. Pp. 32.
II. *Anatomie pathologique des Etranglements internes et Consequences pratiques qui en decoulent, &c. &c.* Par A. P. Duchaussoy, Professeur agrégé à la Faculté de Médecine de Paris, &c. Mémoire couronné par l'Académie Imperiale de Médecine, Séance du 13 Decembre, 1859. [Mémoires de l'Académie, &c.] Tome xxiv. pp. 97–380.
III. *Intestinal Obstruction.* By William Brinton, M.D., F.R.S. Edited by Thomas Buzzard, M.D. Lond. London. 1867.
IV. *Klinik der Unterleibs-Krankheiten.* Von Dr. Edouard Henoch, a. Professor an der Friedrich-Wilhelms-Universität zu Berlin. [3d Ed.] Berlin. 1863. Seite 479–576 [and] s. 639.
V. *On Intestinal Obstruction.* By C. Hilton Fagge, M.D., Physician to Guy's Hospital. Guy's Hospital Reports, vol. xiv., 1869. Article xix. pp. 272–377.
VI. *Ueber "Innere Incarcerationen;" "Hernia retro-peritonœalis," &c.* [By Doctors Heiberg, Kuettner, W. Gruber, Treitz, &c. Archiv der Anat. Path., &c. Virchow. Berlin. Vol. 43, 44, 53, 54, &c.]

I propose to notice briefly, and somewhat critically, a few works upon intestinal occlusion, selecting those named, not because they are the most recent, but because they are, perhaps, better known than others of fresher date, and for reasons which will appear as each work is referred to in detail. All that needs to be generally premised is, that every writer upon this subject justly attaches the greatest importance to a rigorous classification as an essential preliminary to that exactness of diagnosis, on which alone an appropriate treatment can be founded.

First in order are the statistical tables of our late lamented young countryman, Dr. Haven, comprising, probably, all the cases in English, French and American periodicals of the present century to which access could be attained. This method of aggregating cases for study is evidently the one best calculated to establish a very important element in the always extremely difficult differentiation of these obscure affections, namely, their relations of frequency as affecting the probabilities of recurrence. Where cases are taken from monographs or special treatises, a numerical preponderance must, of course, lie with the particular forms thought worthy of such special investigations; but when taken with entire impartiality just as they happen to be reported to societies or in the journals, they will give, as nearly as it is possible to ascertain it, the exact ratio of occurrence. And just here we find our first objection to Dr. Haven's tables.

Two things are very apparent in them at the outset; first, that the observations are uncommonly replete with details, and, secondly, that they really constitute no very large proportion of the whole number of observations which actually exist in the literature of the period covered. Hence it is almost certain that they were not taken indiscriminately, and without regard to meagreness or freeness of details, and not therefore primarily to exhibit relations of frequency; but that they were selected for availability in tabulation. The ratio of occurrence, therefore, becomes a secondary matter, and only accidental to the observations so selected. Only this will account for the great discrepancies between almost all of these ratios on the one hand and the ratios of frequency, as derived from researches made on very much larger scales; for there is no negligence or inaccuracy in any of the figures, and Dr. Haven's study of his cases is nearly perfect. In fact, the very painstaking fidelity with which Dr. Haven performed his work, as he laid it out, with the constantly fallacious results which one can but notice throughout, afford the best possible demonstration of the utter inadequacy of that pseudo-system, which used to call itself the "Numerical System," for the true purpose of medical research. And if we find in the tabulations all the inconsequent fatuities of arithmetic run mad, it is the fault of the method and not of the author.

For example, in the same category are given forms of obstruction which occur almost always in young children, and other forms which hardly ever occur, except in pretty advanced age, and an average age of liability to recurrence is given which happens to be an age at which it is next to impossible for either form to occur. But the unreliable and even false conclusions to which this sort of statistics leads must be more particularly examined. We will take a few tables at random.

The table of cancerous strictures states the number of days of complete constipation to be twenty-two (22), while the average of those of non-cancerous stricture is made out to be thirty-five (35). That is, the complete obstruction caused by the unyielding and often exquisitely tender surface of a scirrhus, of itself rapidly encroaching upon life, is a less marked symptom than the constipation of the milder types of cicatricial co-arctation. But it turns out that among the milder non-cancerous cases are two of three and six months' duration respectively. These cases are hard to credit, but they must not be thrown out because they affect an average the wrong way or establish a rule which cannot be true. But, if we do take out these certainly exceptional cases, the rates of duration would stand as 18 to 22, or twenty per cent. *less* for non-cancerous strictures, instead of sixty per cent. *more.*

Again, in the matter of the elimination of an invaginated portion of intestine, in the very small number reported, twelve recovered and two died. The average length of all the portions passed was twenty-two inches. But the lengths of intestine passed by the two patients who died are respectively thirty-nine and fifty-four inches. This leaves less than nineteen inches as the average length in cases of recovery, and nearly fifty-two inches for those who died. This very important distinction, not made in the tables, would seem to establish the rule that the danger to the patient so situated is in direct ratio to the amount of intestine he is forced to part with, but which rule would again require to be modified by the fact that a very recent observation reports a "recovery," so far as is now known, after *fifty* inches was passed.

The table for intussusception gives an average of 18 years for 49 cases. We need not say that this is just the age when it least frequently occurs. Dr. Haven states that this comparatively young age "confirms the common observation with regard to the frequency of intussusception in children." Not by any means does it do so. But Dr. Haven had carefully studied his cases and knew all his facts by heart, and his very next remark, based on analysis and not on counting, does confirm and prove his observation, which is one of the commonest known, namely, that "in the twenty-two cases it occurred under the age of one year;" and in fourteen cases where the sex was unknown, it was under the age of nine months. It is, therefore, important to know that, in 38 per cent. of the cases, the age was under one year; but only a very fallacious conclusion would derive from the statement that the youngest patient was three months old and the oldest sixty-five years.

A still more serious fallacy is founded on the table for foreign bodies. Here gall-stones are tabulated with fish-bones, prune-stones, and what not, which have been taken in from outside. This is perfectly proper in any general category inclusive of all bodies which effect the obturation or plugging of the intestine, but arranged as the table is, all its conclusions are false. The average age is stated to be twenty-seven years, and there is only "a slight and not noteworthy preponderance of females over the males."

Now almost all these cases are those of obstruction by biliary calculi; and only with reference to such obstruction are the particulars of age and sex of any consequence; peach-stones and fish-bones having no regard for either. And the facts about obstruction of the gut by these calculi are that, more than 80 per cent. of the cases are females, and the average age is hard upon fifty years; it is in the main, therefore, one of the diseases of old women. We trust we have said enough to demonstrate the worthlessness of this system, as shown by the very great care and perfect fidelity with which it was carried out by so talented and industrious a follower as Dr. Haven was.

The memoir of M. Duchaussoy was prepared to meet a question for the best solution of which the Imperial Academy had offered its prize, which was gained by the author of this unique and remarkable work. It comprises the almost painfully minute analysis of more than five hundred observations, many of which are examined before the reader in all their important particulars. As was to be expected, the strictly pathological element is the one always kept in view. Symptoms, though always carefully stated, and treatment, though judiciously considered, are still rather held at a distance, the author confessing that, as they did not enter into the question as proposed by the Academy, he did not feel at liberty to venture largely upon their ground, reserving to himself the intention of some time complementing the present treatise with the other results of the same study and its collateral researches, in another work which he proposed to publish after the Academy should have removed the seal of secrecy. We regret to say that, so far as we know, no such work has ever appeared. With all his elaborateness of detail, however, M. Duchaussoy has not followed the numerical method at all, and was fully aware of its fallacies. There is nothing out of place or incongruous in his tabulations, which are only made, as they should always be, for convenience of reference alone, with few if any attempts to establish averages. Where deviation from type or apparent anomaly occurs, he endeavors to search out a pathological or circumstantial reason for the event. One thing strikes us as very remarkable in this work, and which is also apparent in some German works, which we shall barely glance at further on, namely, how very large a proportion of the observations published in Continental journals are reproduced from the English and American periodicals. In fact, M. Duchaussoy notices this, himself, and asks if the causes of this malady are not more common in Great Britain than on the Continent, and he fancies that the difference in diet would go far to explain the result of statistics. But there is a very great difference, we apprehend, in the respective diets of England, and of Scotland and Ireland. We have ourselves observed a difference in its liability of recurrence in different parts of our own country.

Of Dr. Brinton's work there is hardly anything to express but unqualified admiration. As was very well understood in England, he brought to its preparation the skill of the trained anatomist, the language of the classical scholar, the readiness of the University Lecturer, the profound scope of the philosopher, and the truthfulness and fidelity which had already gained him esteem and honor in every part and period of his too short professional career. He died while preparing this very work, the substance of the Croonian Lectures of 1859, carefully rewritten and amplified for the press.

Dr. Brinton's work is also founded upon the study of more than six hundred necropsies of obstruction, and enriched by both experiments and experience of his own, and by inductions as exact as extensive. Dr. Brinton's Croonian Lectures were delivered before the College of Physicians in 1859, and he claims, with reason, that they influenced the drift of opinion on the treatment, at least, of intestinal obstruction. Compelled by repeated inquiries to republish them, he has incorporated with them all the additional information and enlarged experience of the interval following their delivery, almost, as he says, the Horatian "*nonum in annum.*" We have space only to allude to his well-known attempts to refute the whole theory of anti-peristalsis, especially in its relations to fæcal vomiting as it occurs in obstruction, and we can here do so in nearly his own words.

It was formerly supposed that at a certain stage of intestinal obstruction, the natural peristaltic action of the bowel above the occluded portion was reversed, so that, instead of proceeding towards the anus, it took a contrary direction, impelling the intestinal contents in a similarly retrograde course, so as to return them to the stomach, whence they were vomited, either by prolongation of the same anti-peristalsis through the pylorus to the cardia, or by a fresh but analogous movement, having the stomach for a second starting point. Nearly thirty years ago, Dr. Brinton opposed to this theory the following considerations:—

(1.) Among the numerous writings which affirm an anti-peristalsis, there is not one which substantiates its occurrence. The supposed movement has never been observed, far less seen, to occur with obstruction, or to produce fæcal vomiting.

(2.) In vivisection and artificial obstruction, the movements are more energetically and uniformly peristaltic than in the normal state.

(3.) The natural action of the bowel is supposed to be inverted by over-irritation at the obstruction, which is therefore, " the first link in the chain of causation." But irritation is a common incident of intestinal disease, while fæcal vomiting is not only rare, but is strictly limited to obstruction of the intestines.

(4.) The notion is positively refuted by necropsies, which always show, irrefragably, that the direction of intestinal movements and course of intestinal contents is onward to the obstructed point, and not backwards from it.

(5.) Below, the bowel acts in the normal direction. So that, on the anti-peristalsis theory, a single irritation to any part of the bowel makes it the starting point of two opposite movements, with different results.

It is not within my present scope to criticize these objections, or Dr. Brinton's theory of peripheral advance and axial return, which he proposes as a substitute for anti-peristalsis as accounting for fæcal vomiting; but we cannot help suspecting that his sturdy disbelief in retrograde intussusception, and in the physiological notion advanced, we believe, first by Beclard, that the small intestine narrows constantly as it approaches the ileo-cæcal valve, are all corollaries of one firmly rooted conviction.

Dr. Fagge's paper is a *résumé* of the cases of obstruction which found their way to Guy's Hospital during the preceding fifteen years; they have the advantage of being entirely unselected, and the reports of them being in the very handwriting of the successive demonstrators of anatomy, two of whom are now the very eminent physicians at Guy's—Drs. Habershon and Wilks—they afford entire security as to their perfect accuracy and completeness.

The excellence of Dr. Fagge's paper consists in the fulness of these reports, seventy-eight in number, and in some well-adjusted remarks in the matter of differentiation and treatment, with which he concludes it. He relies upon the excellent authorities we have just noticed—Duchaussoy and Brinton—for all other facts than those original with himself, as taken from the museum and hospital records of Guy's. He cannot, therefore, go far wrong; but he has ventured upon certain novelties, to which we shall take exception.

First, as to nomenclature. Dr. Fagge revives a term which has no place in the present state of knowledge upon this subject. There was once a time, in the nebulous stage of its literature, when the term *volvulus* was used to express a variety of conditions. It had a very large and vague generic application: first, to the primary and inclusive fact of obstruction, convertibly with *ileus*, *miserere*, strangulation, &c.; secondly, it is already in extensive use to express, on the one hand, the pathological condition of invagination, and, thirdly, on the other hand, as applying to the particular portion of the gut which is intussuscepted and strangulated—what the French call the *boudin* itself—and, fourthly, in the sense to which Dr. Fagge limits it, the torsion or twisting of either the gut or the mesentery. As every one of these several affections, or special conditions, can be much better precised by other terms, the term volvulus, as suggesting nothing but confusion, meaning almost anything, and therefore nothing, should be ruled out entirely.

In the second place, Dr. Fagge attempts to establish a new division, or class of obstruction, which he calls contractions; to which I object that this term also is in common use to express, first, generically, the dynamic action of which stricture is the special agency of causation, without regard to any pathological condition; and, again, it is frequently employed to distinguish the non-cancerous or cicatricial strictures, or simple narrowing, of whatever degree and from whatever cause, from the scirrhous or unyielding ragged growths or funguses, which are fatal of themselves; and, moreover, apart from this previous and well-established, if somewhat confused, application, I must further and more seriously object that the very facts which Dr. Fagge adduces do not justify his use of the term as a generically descriptive one.

Seventeen cases, nearly one-fourth of his whole number, are brought into this new category of "contractions." I have carefully examined them in comparison with many other analogous observations from other sources, and discover nothing in any one of them to take it out of another classification, to which they all really belong, that of general inflammatory adhesion, or matting. The gut is not necessarily, nor often, in fact, *contracted;* it is often *compressed,* and the actual diminution of calibre, when it exists, is a secondary condition, arising from shrinking through the compression by thick and unpliable adhesions. There are a good many of these cases in literature; they are all cases of obstruction, but none of them through what, with any regard to precision of terminology, can be called contraction.

Of the remaining works on our list, I can only say that Henoch treats of this subject with the earnestness and extent of research usually found only in special treatises. I am not in accord with his views of paralytic and inflammatory ileus, though he has many of the older English medical writers in his support. Of late years, Dr. Wenzel Gruber, Professor of Anatomy in St. Petersburgh, has been publishing several series of cases in Virchow's Archives. They are usually illustrated by plates of the handsome and accurate type which add so much to the beauty and value of the Berlin periodical. He has, in one series, gone very fully into Dr. Treitz's exposition of retro-peritoneal hernia, and turns over to Dr. Treitz most of the cases now known in literature as mesenteric hernia, including, if I remember rightly, all of Sir Astley Cooper's well-known cases. The pamphlet published by Dr. Treitz, in Prague, in 1859, I have not seen; all our knowledge of it is derived from the notices in Virchow's Archives, and from Dr. E. Pye-Smith's confirmatory observations published in the Guy's Hospital Reports of 1869. I intended to place the subject before the reader in a condensed form, but guiltily feel that I have already overrun the limits kindly accorded me.

198 *Beacon Street.*

GONORRHŒAL OPHTHALMIA.—An unusually severe instance of this affection is reported in the *France Médicale,* occurring in the ward of M. Richet, of Hôtel Dieu, Paris. Both eyes were simultaneously and severely attacked, and the pain was excruciating, while the eyeballs were notably increased in size. Ordinary means having failed to alleviate the pain, M. Richet made an incision to diminish the intraocular pressure. This incision was made so as to affect at the same time the cornea, sclerotic and ciliary circle, incising to the extent of nearly five lines. The left eye, which was the worst, was the one operated upon. The aqueous humor escaped through the opening, and a small portion of the vitreous. The results were immediate diminution of the pain, and at the end of three weeks, a much greater improvement in the functional and general state of the eye, than was observable in the right one. A scarcely visible cicatrix united the divided tissues. —*Med. Press and Circular.*

Progress in Medicine.

REPORT ON PATHOLOGY AND PATHOLOGICAL ANATOMY.

By R. H. Fitz, M.D. Harv.

[Concluded from p. 397.]

Special Pathological Anatomy.

Diphtheritis.—Eberth (*Centrbl.*, 1873, No. 8) has satisfied himself that he can produce diphtheritis of the cornea of rabbits by inoculation with the diphtheritic membrane from the pharynx, endocardial deposits in malignant endocarditis, matter from the surface of diphtheritic wounds, the pus from inflamed veins in pyæmia, the fibrino-purulent exudation in puerperal peritonitis, and the blood from women dying in childbed with sepsis and diphtheria.

He concludes that the bacteria of putrefaction produce inflammation like the diphtheritic organisms, and that pyæmia is a diphtheria. A quantitative difference in the actions of diphtheritic and putrefactive bacteria renders it probable that these organisms are of a different species.

Senator (*Virch. Arch.*, v. 56, p. 56) finds the granular spores described by Buhl, Hüter and others, in the diphtheritic croup membrane from patients. In two cases, he observed them in the urine also, and agrees that they may be found in the tissues of the body. He argues that they are not characteristic of diphtheritis, as he finds the same in healthy mouths as well as in disease elsewhere. (Compare *infection* under general pathology.) He finds much stronger evidence in that fresh diphtheritic masses and bits of tissue from the air-passages (especially when the latter are primarily diseased, without resulting affection of the pharynx), do not contain these elements at all, or in a much less degree than in the pharyngeal forms. At the same time, he does not dispute the inoculability of the disease, but thinks the contagium must be sought in other directions.

The fungi may, however, be dangerous to the individual in that they enter the body, develope there, and produce destruction of the tissue, perhaps decomposition. They may become diphtheritic at the seat of the disease and thus carry the poison through the body, and, finally, produce embolism.

Hoof and Mouth Disease in Man.—Bircher (*Schweizer Correspbl.*, 1872, p. 123; *Schmidt's Jahrb.*, vol. 155, p. 37) has observed four cases where men became sick after partaking of milk from diseased animals. Chills and a burning sensation in the mouth occurred; the buccal mucous membrane secreted abundant mucus, and blisters formed upon it, of the size of peas, which ruptured and left ulcers. Violent diarrhœa occurred. In ten days, the disease terminated. He concludes that the hoof and mouth disease is acute and infectious, its chief symptoms depending upon a catarrhal inflammation of the digestive apparatus, and that the infectious material is contained in the secretions of the mouth and mammary glands.

Leucœmia.—Mosler makes a further contribution to the etiology of this disease (*Virch. Arch.*, v. 56, p. 14). He considers that this disease occurs among children under conditions previously unsuspected.

Many cases of scrofula, rickets and tabes mesenterica are to be regarded as leucæmia. He narrates, briefly, a case where the disease is supposed to have resulted from scrofula, the splenic enlargement present only to a slight degree. He reports, also, a case of splenic leucæmia following intermittent fever. In 112 cases of the disease hitherto recorded by him, only four are found where the disease could certainly be regarded as following intermittent fever. In the present case, traumatic injury co-existed.

Tuberculosis.—The identity of the farcy (perlsucht) of the bovine genus with tuberculosis has been advocated for some time, and the experiments of Gerlach point very decidedly to the probability that the former disease may be transmitted to other animals by means of the milk of the diseased cow. The possibility of a similar inoculation of the human species must also be admitted, though the evidence hitherto has been mainly indirect. Schüppel (*Virch. Arch.*, v. 56, p. 38) claims the identity of structure of these two diseases. His examination of the small nodules to be found in the serous membranes, lungs and lymphatic glands of the diseased cattle convinces him that, as to size, structure, development and regressive metamorphosis, this identity must exist. He is also persuaded, by his histological investigations, that the tubercle is not a lymphatic new-formation, but is as independent in its structure as sarcoma or cancer.

Organs of Circulation.

Pericarditis.—Chapman (*Amer. Jour. of Med. Sciences*, Oct., 1872, and *Wien. Med. Jahrb.*, 1873) has been investigating the structural changes in this disease. He also gives his views with regard to the appearance of the normal endothelium. With reference to pathological alterations, he considers that all the cell-elements of the tissue multiply. New formation takes place first of cells, then of connective tissue (false membrane), finally, most probably, of nerves, though this latter could not be established beyond a doubt. He did not sufficiently examine the condition of the bloodvessels to be justified in describing the part they may perform.

Embolism in Endocarditis.—The inaugural dissertation of Sperling is referred to (*Centrbl.*, 1872, p. 585), wherein statistics are tabulated from 300 cases examined at the Berlin Pathological Institute. In one case, the parietal endocardium was the sole seat of disease ; in all the others the valves were diseased, with or without simultaneous affection of the parietal membrane. As to the disease of the individual valves :—

Alone.	In connection.
Tricuspid, 1 per cent.	10 per cent.
Pulmonary, 0 per cent.	1 per cent.
Mitral, 52 per cent.	85 per cent.
Aortic, 13 per cent.	43 per cent.

Frequently, many valves were simultaneously affected :—

All in 0·3 per cent. of all cases.
All except pulmonary in 5·5 per cent. of all cases.
Tricuspid and mitral in 3 per cent. of all cases.
Pulmonary and mitral in 0·7 per cent. of all cases.
Pulmonary and aortic in 0·3 per cent. of all cases.
Mitral and aortic in 23·6 per cent. of all cases.

Twenty-nine per cent. of all the cases were complicated with embolism; originating on the right side in 2·3 per cent., on the left in 26 per cent. In the former series, the lungs were the sole seat of infarction and abscesses. Of the 76 cases forming the second series, the mitral valve was the source of the embolus in 88 per cent., while in 49 per cent. the aortic valves were diseased.

The emboli were carried to the

Kidneys in 75 per cent. of the cases.
Spleen " 5 " " " "
Brain " 20 " " " "
Intestines and liver in 7 per cent. of the cases.
Skin and liver in 5 per cent. of the cases.
Bone-marrow in 3 " " " "

Finally, to the thyroid gland and the inner membranes of the eye.

Gangrenous Endarteritis.—Van Lair *(Arch. d. Phys.*, 1872, p. 293) gives the result of his examination of the artery in such a case. Externally, the portion diseased was slightly blue, its elasticity diminished, the canal permeable. On cross section, a circular, dark-blue zone was observed, which was found to be limited to the outer portion of the intima. The discoloration resulted from the presence of clumps of brownish-blue granules, most abundant in the immediate vicinity of the middle coat. Towards the healthy tissue, an abundant cellular infiltration was observed. The pigment granules were regarded as directly derived from a necrotic metamorphosis of the cellular elements normal to the part.

Varicose Veins.—Cornil *(Arch. d. Phys.*, 1872, p. 602) makes a series of investigations with regard to this subject, and states that varix, distinguished from phlebectasia, a simple dilatation, "results from a chronic inflammation of the veins." The alterations accompanied by tissue development occur more particularly in the inner layer of the middle coat. The vasa vasorum become distended and extended. Secondarily, the walls may become dilated and calcified. The secondary alterations are allied to those of chronic endarteritis, but differ in that the fatty and atheromatous changes were not observed.

VERMICULAR ACTION OF THE URETHRA INWARDS.—At a recent meeting of the Surgical Society of Ireland, Dr. Macnamara said that for many years he had held that foreign bodies lodged in the urethra had a tendency to be thrust forward; but on inquiring more closely into the matter, he was led to believe in a vermicular action in the urethra, acting from without inwards on a body presenting a sufficiently large superficies. A calculus was thrown forwards by the *vis a tergo* of the urinary stream which overbalanced the vermicular action, as the latter had only a small surface whereon to act. But a catheter, when left in the urethra, had a tendency to pass towards the bladder, and to prevent it from doing so, it was often necessary to apply a jugum. The object of this vermicular motion was to prevent leakage from the bladder.

In the discussion which followed, the president remarked that the number of cases where portions of catheter found their way into the bladder strongly confirmed Dr. Macnamara's remarks. Other members could not agree with this theory.

Bibliographical Notices.

Family Thermometry; a Manual of Thermometry for Mothers, Nurses, Hospitalers, &c., and all who have charge of the Sick and the Young. By Edward Seguin, M.D. New York: G. P. Putnam & Sons. 1873. Pp. 72.

This little book is intended to teach mothers, and others interested in the care of sick children, the proper method of taking the temperature of the body by means of the thermometer, and of recording it in the chart for the inspection of the physician. The importance of repeated observations during the day, in many cases, especially in children, is obvious enough, and any intelligent woman could be taught how to do this by the attending physician in a few minutes. If, however, it be thought necessary to put into her hands an intelligible book of instructions, we are constrained to say that Dr. Seguin's manual fails to supply this want. The style is so obscure, so inflated, so foreign, that we fear the few mothers who should have the patience to read it through would hardly be the wiser for the perusal. This is the more to be regretted because the book really contains much interesting information.

Dr. Seguin proposes for adoption a new thermometrical scale, in which the physiological temperature is marked by zero, corresponding to 37° Centigrade. There are seven degrees above, and four below zero, but the exact value of the degrees, as compared with those of other scales, is not given. To quote his own words: "In the thermometers yet generally used by physicians, the scale starts from the melting point of snow, or from the freezing point of mercury [?], points of no interest to a mother, since they are far removed from the range of health, disease and death. Whereas, in the physiological thermometer, which is hers the more, since it was contrived for her, the health-point, or *norme*, is the pivot or centre of the column of mercury."

The adoption of some such scale would, perhaps, be a convenience if it could be brought about; but this, we fear, would be almost impossible, and unless universally employed it would only add to the already existing confusion.

The Treatment of Whooping Cough with Quinine. By B. F. Dawson, M.D. New York. 1873. Pp. 14.

We have received the above *brochure* of 14 pages, written by Dr. B. F. Dawson, and intended to call the attention of the profession to the use of quinine in pertussis. It is claimed that the administration of this remedy is attended with the most salutary effects, relieving the urgent symptoms generally within the space of a few days. The history of six cases is given, in which the remedy was employed with the best apparent effects. Dr. Dawson suggests the following rules to be observed in testing the drug:—

1. Give the quinine (sulphate or hydrochlorate) dissolved by acid in pure water only. For children under 3 years, from gr. v. to gr. viij., and for older children and adults, from gr. x. to gr. xij. to the ounce.

2. Give not less than a teaspoonful *every single*, or, at the longest, every two hours during the day, and whenever the cough comes on in the night.

3. Give nothing afterwards for some minutes to destroy the taste, or to wash out the mouth.
4. Continue giving it, notwithstanding the first dose may be vomited.
5. Be sure that the quinine is pure, and thoroughly dissolved.

Now, while we are not unwilling to give quinine a fair trial, provided our young patients are amiable enough to swallow this unpalatable mixture every hour in the day, yet, we must be permitted at the outset to express ourselves as sceptical as to the result. Of the thousand and one specifics recommended, we have already tested a pretty large group, and have thus far failed to detect any very striking curative effects in any of them. Some of the remedies most highly extolled we believe to be as inert as homœopathic globules, while others, from their depressing effects, are positively injurious.

We have known the disease to persist month after month in spite of a most liberal exhibition of cochineal, hydrocyanic acid, nitric acid, alum, coffee, oxide of zinc, ipecacuanha, belladonna, the topical application of nitrate of silver to the larynx, counterirritants to the spine and epigastrium, and sinapised pediluvia. On the other hand, there can be no doubt that the spasms of coughing may be cut short by the inhalation of certain substances, such as the fumes of coke, benzine, or sulphuric ether; but that the duration of the disease is abbreviated by any of these agents is by no means evident. The experiments of Dr. Letzerich would certainly indicate that the vegetable fungi found in the air-passages tended to aggravate, if they did not directly induce, the spasmodic cough, and medical men are also in accord with regard to the destructive effects of quinine upon the germs of these fungi. If, however, the characteristic symptoms of this disorder are due to the presence of these foreign growths in the air-passages, instead of depositing our anti-parasitic remedies in the stomach of the sufferer, does it not seem preferable to employ rather such agents as can be directed immediately, by aid of the atomizer, or inhaler, to the parts affected?

A Hand-book of Post-mortem Examinations and of Morbid Anatomy. By FRANCIS DELAFIELD, M.D., Curator to Bellevue Hospital, &c. &c. New York: William Wood & Co. 1872. Pp. 376.

IN noticing this work, it is specially important to pay attention to the preface, in which it is indirectly stated that the needs of the physician are to be chiefly considered; also that it is intended to present a dissecting-manual, as it were, of Pathological Anatomy and Medical Jurisprudence.

With such objects in view, all must admit that the end has been fairly if not fully attained. The amount of theory is comparatively small, the varied morbid appearances, and a rational explanation of many of them, are clearly and concisely stated. The occasional draughts from the author's personal experience, elaborated as it must have been from the wealth of material under his supervision, create rather a longing for more evidence from the same source. Our main regret, shared, perhaps, by but few, is that the needs of the student should not have been considered paramount. With so few systematic works on pathological anatomy, and with none of a recent date, it must be admitted no branch of medicine exists which is not better provided for in this respect. Such great progress has been made, especially on the Continent, since the Sydenham edition of Rokitansky was published, that ignorance seems almost wilful. A translator cannot fill the gap; a judicious compiler could accomplish wonders, and, judging from the "Handbook," its author should be thoroughly competent to undertake the more serious task.

The general arrangement of the present work seems excellent; methods, lesions of separate organs, the alterations observed in the more common diseases, and in cases where death has occurred from poison and violence. The closing chapter, on tumors, must possess a general interest simply. Though the author rightly insists upon a knowledge of the histological details, in order that a surer prognosis may be given, yet it may be safely asserted that but few will be enabled to profit. So little suitable attention is paid to normal histology in the medical schools that it is not to be wondered at if even the younger members of the profession are unable to classify the neoplasms, whose number is legion though their names be few. The general laws of malignancy are so easily comprehended, however, that skill with the microscope is not absolutely essential. It is equally true, that with increased knowledge derived through the microscope, additional accuracy of prognosis is often obtained, and those who are able to classify the tumors with the aid of this instrument, will be enabled to draw practical conclusions by referring to the closing chapter.

In a work of this character, the absence of illustrations is not to be regretted. It would be impossible to produce colored drawings, and the customary wood-cuts, representing gross appearances, are generally so little suggestive that the resulting increased expense would merely diminish the usefulness of the book. Even in the famous Atlases of Cruveilhier and Lebert, the experienced pathologist might often be unable to give a name; the inexperienced but painstaking observer, by careful description, can be of much more service.

The publishers have not been neglectful in making the book shapely, and it is hardly to be doubted that the general practitioner will repay both author and publishers for their united efforts.

BOOKS AND PAMPHLETS RECEIVED.

Ophthalmic Contributions. By George Strawbridge, M.D. Philadelphia: Lindsay & Blakiston. 1873. Pp. 26.

Text-Book of Physiology. By John Hughes Bennett, M.D., F.R S. With 21 Photo-lithographic Plates. Philadelphia: J. B. Lippincott & Co. 1873. Pp. 606. (From James Campbell.)

Clinical Lectures on various Important Diseases. By Nathan S. Davis, A.M., M.D., Professor of Principles and Practice of Medicine and of Clinical Medicine in Chicago Medical College. Chicago: J. J. Spaulding & Co. 1873. Pp. 262. (From the Publishers.)

Boston Medical and Surgical Journal.

Boston: Thursday, April 24, 1873.

We are happy to give a prominent place in our pages to the following announcement of a project to honor the memory of a great man.

MEMORIAL TO VON GRAEFE.

The undersigned have been appointed a committee to coöperate, in America, with the central committee at Berlin, in obtaining subscriptions for the erection of a bronze statue of von Gräfe in front of the Charité Hospital in that city.

They appeal, in behalf of this object, not only to the profession, who recognize the great benefits conferred on medical science by his indefatigable and intelligent labors; but to all who have ever been patients of von Gräfe, and to the general public, who have received vast benefits, in the improved treatment of eye diseases, as the results of his genius and self-devotion as an observer and teacher.

Subscriptions, of large or small sums, will be received by either of the members of the committee.

Henry W. Williams, Member of the Berlin Committee,
15 Arlington St., Boston.
B. Joy Jeffries, 15 Chestnut St., Boston.
H. Derby, 6 Beacon St., Boston.
C, R. Agnew, 19 E. 39th St., New York.
H. Althof, 40 W. 36th St., " "
H. D. Noyes, 73 Madison Av., New York.
Chas. E. Hackley, 47 W. 31st St., New York.
Wm. F. Norris, 1534 Locust St., Philadelphia.
E. Dyer, 1429 Walnut St., Philadelphia.
Wm. Thomson, 1607 Locust St., Philadelphia.

THE STATE BOARD OF HEALTH.

This is one of the institutions to which we look with what we hope is justifiable pride. A State Board of any kind, composed of able, honest and fearless men, is, in these times, something remarkable. The members have shown themselves to be such by their diligence in unearthing abuses, and in obtaining information on important and mooted questions, not from any small section of this country, but from all parts of the civilized world. Among the triumphs of the Board, perhaps the greatest is the overthrow of foul and irresponsible slaughter-houses, and the erection of a grand abattoir which will be clean, healthy and profitable to those in charge, and will secure good meat to the public. We are glad that the legislature has given due attention to the request for the appointment of an inspector of animals and meat, who shall be under the control of the Board.

The Board urge very properly the importance of selecting good men for the Boards of Health of cities and towns, and that one member should be a physician. We wish the Board had gone on to suggest some way by which the appointment of good medical men might be assured. It is, we believe, left with the municipal government of cities and the selectmen of towns, who, through ignorance or interest, may trifle with the health of the community by keeping the control in their own hands by referring the matter to a committee of themselves, or by appointing irregular and incompetent practitioners. It will not do for us to forget the action of last year's Board of Aldermen, in this city, who, in spite of warnings and petitions, refused to establish a Board of Health till the approach of election made the recusant members shrink from the public indignation. The report of the State Board on Smallpox at the end of the volume shows that this is of no slight consequence, for we find the names of 126 cities and towns, out of the 197 in which smallpox occurred, to which Boston was one of the probable sources of contagion, and 97 in which it was the only probable one. In the former class there were from Jan. 1st, 1872, to Feb. 1st, 1873, over 1700 cases, and in the latter some 1250. Had a new Board of Health been appointed at the beginning of last summer, the result would be now very different.

Many of the papers which have appeared in these reports are the work of physicians employed to study out certain problems and to publish their results under the patronage of the Board. The papers prepared in this way have been good, perhaps without exception, but we feel it our duty to say that some have not been as good as they might have been, because they have been written by gentlemen who were not by long education familiar with their subjects. A well educated and industrious man can, in the best part of a year, sufficiently master a subject of which he had but the most general knowledge, to write a paper that will be instructive, and that can be called good, but this will not be equal to one produced by an expert. We think, both in justice to the public and to themselves, that the Board should be more careful in this matter. Good papers will not do; we expect the very best. There is, however, no great cause for complaint, and the fourth report is equal to any of its predecessors. Dr. Derby's paper on "Sewerage, Sewage; the Pollution of Streams; the Water-supply of Towns," and Dr. Bowditch's "Analysis of a Correspondence on some of the Causes or Antecedents of Consumption" are particularly admirable; we hope to consider them in detail on some future occasion. Today, we would consider a number of papers bearing on the food and drink of the community.

The Secretary, Dr. Derby, writes on the food of the people, the Hon. Mr. Aldrich on beer-shops and prohibitory laws. "Flavoring articles," the adulteration of milk and of food, are discussed by Drs. H. K. Oliver, A. H. Nichols and Mr. H. B. Hill respectively; while parts of Dr. Bowditch's correspondence on the cause of consumption and of Dr. Jarvis's paper on Infant Mortality relate to the same subject.

Dr. Derby's report of the food of the people throughout the State, and the way in which it is eaten, though not telling much that is new, is given so vividly as to fill us with horror. "The usual or average time occupied in the process of taking food by the people of this State we think does not exceed from twelve to fifteen minutes for each meal." It is shown that the people look upon taking food as a necessary evil, causing delay, just as a train must wait to take in fuel, and, like that operation, should be finished as quickly as possible. The quality of the food is shown to be poor. Pie stands prominent on the bill of fare. Go where you may, by day or by night, pie stares the traveller in the face. We are told that "pies are eaten twice a day by most people in Massachusetts above the age of five, and if a lunch is asked for, it is usually pie, and nothing else." But think what pie is! The paste (we will not call it pastry) contains the cheapest fat that can be found, and prodigious amounts of the vilest butter. The taste of the chopped meat (so universally used) is disguised by spices so as not to be recognized, and it is implied that very frequently ignorance is bliss. These pies take, to a great extent, the place of bread, and, indeed, in most cases, no great harm is done, so poor is the latter. Good bread was certainly made here one or two generations ago; we have now become too "civilized" to waste time in making food as it should be, if we can make it any way quicker. We fear Dr. Derby is right when he says that "no improvements in the manner of preparing food for daily use stand the least chance of adoption in Massachusetts unless they are labor saving." "Pork and beans furnish the chief nutriment of at least two-thirds of the people of this State above the age of infancy for one day every week"—which is certainly not good for weak stomachs, even without its usual accompaniment of hot, undigestible "brown bread." The frying-pan is in great use. The dangers of the abuse of tea are dwelt upon, and it is shown that when made by long stewing before the fire it is intoxicating. Dr. Derby's report is disheartening.

We have just seen what kind of food people make for themselves; it is equally painful to see what is supplied them by dealers. Dr. Oliver, on the Flavors, tells a startling story about the use of poisonous articles in food and the manufacture of fruit syrups, liquors and wines, proving stories to be true which we have often looked on merely as pseudo-scientific gossip. The account of the uses to which the unpurified oil of bitter almonds, which contains prussic acid, is put, makes the impropriety of its being freely sold very evident. Mr. Hill gives an account of the discovery of copper in ten out of twelve samples of pickles, and of that of lead, mercury, arsenic in the pigments used in confectionery.

Dr. Nichols shows that milk is almost universally watered, and that it is possible, by adding certain substances, to make the specific gravity about what it should be, so that the hydrometers (which some milkmen carry with them) will fail to expose the fraud. The law is not sufficiently stringent, for the penalties are not severe unless the offence be committed knowingly. We hold that it is the duty of those supplying the public to *know* that the milk is not adulterated, and if they gave the same attention to it which many now give to hiding their tracks they would run little risk of being falsely convicted. Though the law, as we said, is not what it should be, yet an association of active men, who make it their business to convict fraudulent milk-dealers and publish their names would do more than any other to protect the public.

Mr. Aldrich prints a number of communications from correspondents in Massachusetts, and quotes from the report of a Committee on Intemperance in the Lower House of Convocation in the Province of Canterbury, England, to show that the effect of the sale of beer and ale is decidedly bad.

The answers that Dr. Bowditch has received to his questions concerning the effect of the use and abuse of alcohol upon consumption are very interesting, but we will imitate the wisdom of the Board in avoiding the temperance question, merely suggesting, if we have a right to interfere with our neighbor's food and drink, that a party for the prohibition of free pie would have a most philanthropic mission.

RESEARCHES CONCERNING CHOLERA. No. II.—The *British Medical Journal*, March 22, 1873, continues its review of the report of Messrs. Lewis and Cunningham. Having satisfied themselves that no bacteria, vibriones, or allied organisms exist, either actually or potentially, in the blood in a state of health or in cholera patients, these investigators wished to ascertain whether such organisms would live and multiply indefinitely when introduced into the blood of healthy animals. They showed quite conclusively by experiments that such organisms are not prone to multiply in the blood of healthy animals, or even in those in which there is a slight departure from the condition of health.

An extended account is given relating to the effects produced by the introduction of choleraic and other organic fluids into the system, these being partly injected into the veins, and partly into the peritoneal cavity. In only one out of the seventy-nine experiments upon dogs was a recent choleraic fluid employed. In the great majority of cases, fluids in a state of more or less advanced putrefaction, and more or less swarming with bacteria, were made use of. These experiments, therefore, must be considered to bear upon the subject of "putrid infection," rather than upon that of cholera, since it has already been shown by the investigations of Dr. Popoff, of St. Petersburg, that the efficacy of choleraic fluids in producing cholera in animals into which they are injected, is in direct proportion to the freshness of the fluids employed. When the excreta have undergone decomposition, the choleraic symptoms, if manifested at all, are obscured and more or less mixed with those of poisoning by putrid materials. Messrs. Lewis and Cunningham do not seem to have recognized fully the importance of employing the fluids in a fresh state. In the one experiment in which an injection of such material into the femoral veins of a dog was used, no choleraic symptoms supervened.

In the remainder of the experiments, in some cases putrefying choleraic discharges, and in others ordinary alvine discharges, more or less fetid, were injected. There was an absence of ill effects following the introduction of these putrefying materials into the blood in the majority of cases, while in others death resulted. The authors are quite as unable as other observers have been to give the rationale of the variation in the results. They found, moreover, that "when a dog had once recovered from the effects of an operation, succeeding operations had not, in a single instance, proved fatal to it, no matter whether the material introduced into its veins consisted of choleraic or non-choleraic, or of alternate doses of these." Do not facts like these throw strong light upon the many instances, constantly thrusting themselves upon the notice of medical men, in which persons peculiarly exposed to the contagion of even the most contagious diseases show themselves unamenable to their influence?

The *post-mortem* lesions met with, whilst agreeing among themselves, differed from those peculiar to cholera. Almost invariably, signs of intestinal disease were present, varying from more or less intense congestion of the villi and intestinal glands, to complete disorganization of the mucous membrane of the small intestine, generally extending over its whole extent, from the duodenum downwards, "except for a portion of from one to two feet above the ileo-cæcal valve, a portion which, in almost every instance, has escaped being materially affected." The authors were surprised at this exemption, because, in the necropsies of cholera patients, it was just this portion of the intestine which seemed to show the most marked tendency to the congestions which are so apt to occur in this disease.

Twelve cases are recorded, in which the organic fluids, instead of being injected into the blood, were introduced into the peritoneal cavity. The material in four cases were choleraic fluids; in three, ordinary alvine discharges; in one, a decomposing solution of beef; and in four, peritonitic fluid, recent and decomposed. Only three of these animals died. All the others were killed within twenty-four hours after the operation, and all but two, whether they died or were killed, presented the same marked and constant lesion of the mucous membrane of the small intestine, though in nature it seemed to be very different from that which was encountered in the last series of experiments. This lesion is thus described: "The mucous membrane itself was not in a single instance materially affected; but a sanguineous exudation had taken place, giving the tube of the gut a more or less evenly distributed coating, which, when carefully peeled off with a forceps, left the mucous membrane and its epithelial lining intact." Microscopical examination showed the mucous membrane to be almost unaltered, whilst the layer by which it was lined was composed of altered blood-elements, blood crystals, &c., though no entire red corpuscle could be detected. This sanguineous exudation generally ended abruptly, several inches above the ileo-cæcal valve, leaving this portion of the intestine, as it had been in the other series of experiments, in a comparatively healthy state. Usually, the signs of peritonitis were well marked, and sometimes intense. More or less distinct pericarditis was met with in fully one-half of the cases, although extension of the inflammation to the pleuræ was almost always absent. This tendency of putrefying fluids to set up pericarditis without pleurisy when injected into the abdominal cavity, throws light upon the previous observations of Dr. B. W. Richardson, to the effect that a similar injection of lactic acid into the abdomen also sufficed to set up inflammation of the serous membrane of the heart. His inference from this fact, however, that as to the supposed connection between lactic acid and rheumatism, would certainly be much weakened, unless it were found that an injection of lactic acid into other parts of the body also sufficed to set up pericarditis.

The observers found that the fluids met with in the peritoneum in these cases swarmed with irregular masses of bioplasm, exhibiting great activity, and very rapidly undergoing the process of segmentation.

Although these inflammations were excited by the introduction of fluids swarming with bacteria, the authors were convinced that no material increase took place so long as the inflammatory process was progressing actively. In several instances, not a bacterium could be detected in the recent fluid, and in all, the numbers present seemed to be in an inverse ratio to the number and activity of the bioplasts.

In this series of experiments, also, no special effect was produced by the putrefying choleraic fluids different from those brought about by other less specific putrefying liquids; and the affection of the intestine "appeared rather to be the result of local disturbances of the circulation, excited by the inflammatory action induced by the introduction of the extraneous matter into the peritoneal cavity, than by the action of any specific agent."

UNILATERAL CHOREA OCCURRING SUDDENLY. DEATH FROM CAPILLARY BRONCHITIS. AUTOPSY.—A married tailor, of intemperate habits, near 70 years of age, was seized suddenly with muscular agitations, beginning in the left hand, and extending quickly to the left side of the face and left leg. The commotion of the limbs was severe and incessant, and it was found impossible to keep the bed-clothes over him at night. The tremors of the arm were so constant, that he soon rubbed his elbow out through a thick, strong Jersey, and then rubbed the skin off his elbow. Several hours' sleep were obtained each night by the use of chloral and bromide of potassium. Exposure to cold in various ways brought on a capillary bronchitis, which terminated fatally on the nineteenth day after his first seizure. A careful autopsy, made four hours after death, revealed the following lesions :—

The cerebro-spinal fluid was more abundant than usual, as indicated by the amount of fluctuation observed before the theca vertebralis was opened. The spinal dura mater was adherent to the back of the bodies of the seventh and eighth dorsal vertebræ, and was hereabouts thickened, gristly, and semi-cartilaginous. The cranial dura mater was so firmly adherent to the calvaria that the falx cerebri had to be cut, leaving the superior longitudinal sinus attached to the skull-cap, or the brain would have been injured in its removal. . . . All the cerebral arteries, both basal and cortical, presented the whitish, cylindrical thickenings of atheroma, in rings, patches and spots. The right vertebral artery, as it lay beside the medulla oblongata, was very much reduced in calibre, looking like a piece of sea-twine; while the left one, thickened, white and corrugated on its inner surface, was about six times as large, and resembled the posterior tibial in size. All the branches of each middle and cerebral artery were more or less diseased, as well as the main vessels; in none could any distinct recent obstruction be made out with the naked eye. The cortical arteries were sufficiently thickened in many places to oppose a very perceptible resistance to the knife used in slicing the hemispheres. Each corpus striatum presented several dull, purple blotches immediately beneath the ependyma. . . . . . The atheromatous change was very conspicuous in the aorta and its large branches; stiff, pale-yellow plates alternating with reddish-yellow depressions. The aortic valves held water well, and were smooth, though thickened; the wall of the left ventricle was one inch thick at the base, the same at the middle part, and seven lines at the apex. . . . . The kidneys each presented the characters of granular disease in a marked form; they were hard, tough and resistant, reddish-brown, cystic; the tunica propria was milky, thickened, adherent. . . . . The renal arteries external to the pelvis were very atheromatous.—A. W. FOOT, M.D., *Irish Hospital Gazette*, March 15, 1873.

THE PATHOLOGY OF PUERPERAL FEVER.—The *Med. Times and Gazette*, March 22, 1873, notices the views of D'Espine on this subject. ("Contribution à l'Etude de la Septicemie Puerpérale," Paris, 1873.)

D'Espine gives in detail the results of injections into the pregnant uterus or subcutaneous cellular tissue in rabbits, &c., of vaginal and uterine discharges, and of lochia at various periods after delivery. He found that a filtered solution of normal blood, of vaginal mucus, or of liquor amnii, injected into the cellular tissue does not produce fever, nor does blood from the vagina during delivery; that a similar injection of lochia, taken at the end of the first day, always causes fever, but without symptoms of notable alteration of health, the fever disappearing almost at once. An injection of lochia taken at the end of the third day always produces a severe and persistent fever, with abscesses at the seat of injection, and invariably kills the animal, with symptoms of septicæmia. It would seem, then, that the presence of certain fluids in the genital passages is one of the elements in the production of puerperal septicæmia, that the lochia belongs to this class of fluids, and that the liability to puerperal fever increases with the age and foulness of the same.

In regard to the presence of open or wounded absorbing surfaces in the genital tract, D'Espine notes that laceration of the cervix uteri, or an open condition of the mouths of the placental sinuses, with uterine atony, is frequently present in puerperal fever, as clinically observed; that cases of severe labor, especially those complicated with hæmorrhage, are most liable to the disease; and that *post-mortem* it is exactly in the lymphatics leading from the cervix and from the placental site that pus and other evidences of infectious inflammation are to be found.

The author contends that there are all degrees of puerperal septicæmia; that normally there is no elevation of temperature in the puerperal state; and that the so-called "milk-fever" has nothing to do with that secretion, but is a true, though mild septicæmia.

THE TRUE LAW OF POPULATION.—In the *Medical Press and Circular* of February 5th ult., Dr. Nathan Allen, of Lowell, elaborates a theory which, based on certain physiological principles, is believed to explain the recognized facts of the increase of population and the quality of hereditary descent. Instead of accepting the views of other authorities that external conditions, as food, climate, exercise, control primarily the growth of population, Dr. Allen makes these agents secondary and indirect, and reduces all the factors to a single law, inherent in the human body itself. This law, shaping life, character and destiny, is defined thus: "It consists in the perfectionism of structure and harmony of function."

An absolute realization of this principle is manifestly impossible in nature; but the nearer the approach to the standard, the more completely the law of propagation can be carried out. Among the obstacles interfering with its practical fulfilment, diseases, and especially hereditary diseases, are important.

Physiology affords some general principles favoring this view of the law of propagation. Just as excessive exercise of any part or organ requires compensatory nutrition at the expense of the nutrition of other parts or organs, so do certain temperaments, when unduly developed in the course of successive reproduction, compromise the development of other vital endowments. Thus, if the hereditary nervous temperament is allowed to expand unduly through the influence of intermarriage, it will predominate over the sensuous and will operate unfavorably upon the increase of progeny; it is a fact that in the highest states of culture and civilization, the tendency has been to a minimum of offspring. This principle is illustrated, also, in the case of abnormal classes, as idiots, the insane, the deaf and dumb; in the intermarriage of relations whereby the same weaknesses are intensified in propagation, and in other conditions of hereditary descent.

The theory of human increase here adduced finds favor in the well-known improvements which have been made in stock-breeding and in horticulture in recent years.

Finally, the writer truly states that if his theory of an inherent law of increase be true, it opens a wide field for study in physiology, while it offers to man himself the highest motives for improvement as the counterpart of his free agency.

FALSE TEETH.—False teeth have their disadvantages as well as their advantages. They caused the death of Cuvier and the discomfiture of Lord Brougham. Cuvier, impatient at the interruptions of that perpetual interrupter, M. Glais-Bizoin, in the National Assembly, rose so impatiently to answer him, that he jerked his teeth on to the floor of the Assembly, and, stooping not less precipitately to pick them up, fell head foremost, and struck his head against the floor so heavily as to give rise to the illness which proved fatal to him. M. Glais-Bizoin, then a very young man, promised himself to abstain from his fatal habit of incessantly interrupting; but he was incorrigible. Lord Brougham, in the course of the proceedings of a great meeting of the Social Science Association, of which he was President, was stopped in the middle of a speech by his teeth falling out. After groping on the floor, and on presently resuming his speech, he made the best of the incident by observing that "our teeth are the source of troubles from infancy to old age."—*Brit. Med. Jour.*

ACARO-DERMATITIS AUTUMNALIS. By J. W. SOUTHWORTH, M.D., Toledo, Ohio.—This affection is found mostly on the lower extremities of laborers and others who frequent vineyards and harvest fields of grass or grain, in the latter part of the summer and autumn. It presents itself as a more or less pruritic and intense erythemation, in patches of greater or less size, according to the number of parasites present. Occasionally, wheals are formed in the immediate vicinity of the animalcules, especially in sensitive subjects who have indulged in much scratching. The skin may be lacerated and swollen. Violent inflammation of the latter, and its underlying tissues, resulting in sloughing, suppuration or gangrene, to such an extent as to imperil life, or necessitate amputation of the affected limb, has been known to occur. This latter is reported to have happened among some troops at Martinique.

Cause.—The attacks of the acarus autumnalis or harvest mite, which, on account of its bright red color, is also called rouget, or béte rouge by the French. Septus autumnalis is another synonym. Neumann states that Gruby has described this parasite in the *Allg. Med. Zeitung*, 1863, under the head of aracnide.

The diagnosis is quite easy, as the acarus is readily found, with its blood-distended abdomen, partially imbedded in the inflamed tissues; a minute, red, oval body, requiring a little care and close inspection to detect in some instances. It may be found on almost any portion of the skin, but is chiefly met with on the inferior extremities.

The treatment is by careful removal of the parasite with forceps where there are only a few; and when the reverse is the case, the application of some efficient parasiticide, as a spirituous solution of carbolic acid, corrosive sublimate, or camphor sufficiently diluted with water to prevent any increase of the existing inflammation.

The after-treatment may be of any of the usual cooling, bland or astringent lotions, such as solution of acet. plumbi, or acet. ammoniæ in water, vinegar and spirits of wine, camphor water, &c., all of which must be applied according to the principles of surgery adapted to traumatic dermatitis.—*Detroit Review of Medicine and Pharmacy.*

Correspondence.

THE note below is sent to the JOURNAL, trusting it may be of service to some of our profession, who are hunting up quarters for the sick. C. E. B.

ST. PAUL, MINN., April 5th, 1873.

DEAR SIR,—I promised Mr. ——, of your city, to give you my views of his case, and my reasons for thinking this not the climate best adapted to his case.

As you know, he is suffering from pretty severe chronic bronchitis with something that seemed to me to be lobular pneumonia of the lower portion of the right lung. I could never discover anything like tubercles in his lungs.

He seemed to improve on first coming here, mainly, I think, on account of improved digestion, but, after a couple of months, came to cough more and raise freely of bronchial mucus and muco-pus. It was plain to me the bronchial catarrh was aggravated by the dry, cold atmosphere. So he decided to go farther South. I do not think his general condition any worse than when he came—but he was not improving at the time he left.

Such cases as his are rarely benefitted by a residence here. In fact, catarrh and bronchitis are the common diseases of this climate.

Cases of incipient phthisis and of derangement of liver and stomach are greatly improved by this climate, and you are safe in sending such cases here. Yours respectfully, D. W. HAND.

"INFANTILE UTERINE HÆMORRHAGE."

MESSRS. EDITORS,—When Dr. Holmes's communication upon the above subject appeared in the March 20th number of this JOURNAL, I had just observed a case similar to those described, of which this is the history.

Mrs. D——, of fleshy habit, and somewhat nemotic family history, after a tedious labor, was delivered of her first child. Troublesome hæmorrhage followed, which ergot and pressure controlled.

For ten days, slight hæmorrhage followed every (passive) change of position in bed, the symptom gradually disappearing on the administration of a mineral acid.

The child, a female, appeared perfectly well until the fifth day, when, without any attending symptoms, slight hæmorrhage from the vagina occurred. This continued in pretty uniform quantity (two or three drachms *per diem*) until the eighth day, when it ceased spontaneously. Both mother and child are now well, though the former suffered for a few days from supra-orbital neuralgia, caused by loss of blood. The case acquires especial interest from the fact (in addition to the hæmorrhagic tendency of the mother) that a sister of the mother and her child both presented similar phenomena a few days after birth. A third sister has had children, with no unusual event attending birth or infancy. Yours truly,

Bangor, Me. G. W. FOSTER, M.D.

THE following is from the report of the Superintendent of Health and City Registrar of Providence, on the deaths in that city for March last:—

"The decedent from poisoning in March was a child killed by a dose of Mrs. Winslow's Soothing Syrup. It has long been well known to physicians that the soothing properties of this popular medicine are due to opium in some form, and that the quantity of opium is so large as to make it a decidedly dangerous nostrum. There is no doubt that a considerable number of deaths every year should be recorded: 'Poisoned by Mrs. Winslow's Soothing Syrup.'"

THE Philadelphia Obstetrical Society has issued a circular asking for "aid in the formation of a Museum of Distorted Pelves, Obstetrical and Gynæcological Instruments." If the owners of remarkable pelves be unwilling to part with them, casts or photographs will be acceptable. In certain cases, pecuniary recompense will be given. Not only modern improved instruments are desired. but those which are merely of historical interest. Drs. W. F. Jenks, J. V. Ingham, and Horace Williams are a committee on this matter. Donations should be sent to Dr. Ingham, No. 1342 Spruce Street, Philadelphia. A museum of the kind proposed would be of great value.

AT the annual meeting of the Middlesex South District Medical Society, the following officers were elected for the present year, viz.:—

President, Morrill Wyman, M.D.
Vice President, G. J. Townsend, M.D.
Secretary, C. E. Vaughan, M.D.
Treasurer, J. W. Willis, M.D.
Censors, Drs. S. W. Driver, H. P. Walcott, H. E. Marion, B. F. D. Adams, L. R. Stone.

NOTES AND QUERIES.

WILL any gentleman who has seen a case of ergotism please describe it. Was it from taking ergot as a medicine? If so, how long was it continued, in what preparation, and in what dose? The inquirer has given the fluid extract of Squibb's, in dose of fifteen (15) drops, three (3) times a day, without intermission, for months, with no other apparent effect than that upon the pulse.

ANSWER.

MORTALITY IN MASSACHUSETTS.—*Deaths in sixteen Cities and Towns for the week ending April* 12, 1873.

Boston, 140—Charlestown, 7—Worcester, 15—Lowell, 27—Milford, 3—Chelsea, 4—Cambridge, 27—Salem, 8—Lawrence, 7—Lynn, 18—Fitchburg, 4—Taunton, 6—Newburyport, 5—Somerville, 5—Fall River, 29—Haverhill, 10. Total, 315.

Prevalent Diseases.—Consumption, 45—pneumonia, 32—cerebro-spinal disease, 26—scarlet fever, 16.

There were three deaths from smallpox in Cambridge and two in Boston. Deaths from cerebro-spinal disease were reported as follows:—Twelve in Boston, seven in Haverhill, four in Lynn, two in Chelsea, and one in Worcester.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, April 19th, 153. Males, 77; females, 76. Accident, 3—apoplexy, 4—anæmia, 1—bronchitis, 4—inflammation of the brain, 1—congestion of the brain, 1—disease of the brain, 3—chorea, 1—cancer, 3—cerebro-spinal meningitis, 16—consumption, 21—croup, 2—debility, 2—diarrhœa, 2—dropsy, 3—dropsy of the brain, 5—drowned, 1—scarlet fever, 18—typhoid fever, 5—gastritis, 1—disease of the heart, 9—hæmorrhage, 2—jaundice, 2—disease of the kidneys, 4—disease of the liver, 4—congestion of the lungs, 2—inflammation of the lungs, 14—marasmus, 4—old age, 3—paralysis, 1—pleurisy, 1—premature birth, 1—peritonitis, 2—pyæmia, 1—puerperal disease, 1—smallpox, 2—unknown, 3.

Under 5 years of age, 57—between 5 and 20 years, 18—between 20 and 40 years. 37—between 40 and 60 years, 21—over 60 years, 20. Born in the United States, 104—Ireland, 32—other places, 17.

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Original Communications.

THE ACTION OF THE INTERCOSTAL MUSCLES.

By Thomas Dwight, Jr., M.D., Professor of Anatomy at the Medical School of Maine.

Read before the Boston Society of Medical Sciences, March 25th, 1873.

The action of the intercostal muscles has been a subject of discussion ever since they were described by Galen, A.D. 131. It would be superfluous, as well as tedious, to attempt to give a *résumé* of all the views which have been advanced, for it has been frequently more or less perfectly done, no writer ever failing to add some slight modification of his own. Both sets of intercostals have been held to be inspiratory, both to be expiratory, and both to be inspiratory and expiratory, and there is an equal difference of opinion concerning each considered separately; both have also been held to be of service merely as ligaments. In the first half of the eighteenth century, there was a spirited discussion on the subject between Haller and Hamberger, the former maintaining that both layers were inspiratory, the latter that the external layer and that part of the internal one situated between the cartilages were inspiratory, and the remainder of the internal one expiratory. Haller appears to have had the best of the argument, and his views prevailed until Hutchinson, in his celebrated article "Thorax," in the Cyclopædia of Anatomy and Physiology, declared for Hamberger. Since then, the tables have been turned, and, though frequently disproved in several points, Hutchinson's article continues to be quoted as authority by perhaps one half of those dealing with the subject. (In Europe, excepting Great Britain, the proportion of his defenders may not be so large; in America it probably is larger.)

The object of this paper is to show, chiefly by arguments already presented, that Hutchinson's views, resting on erroneous data, are entirely wrong; and secondly, to call attention to some original observations and experiments, and to some points in the laws of muscular action, nervous supply, and in the phenomena of respiration suggesting very different conclusions.

It is evident that the Hutchinsonian theory presupposes that all the ribs have an equal amount of motion, which is not the case. Now if any rib is fixed during any part of the respiratory act, it is clear that these rules will not apply, and if any rib be hindered from sharing fully in the general motion, it is practically, to a certain extent, fixed, as regards the others, and the relations are disarranged. If one rib be fixed, the tendency of both sets of fibres will be to pull the next rib towards it; but this is made impossible, or more or less difficult, by the connection of the anterior ends of the ribs with the sternum, or with one another, except in the case of the last two. The elasticity of the ribs cannot be overlooked in this connection; from what has just preceded, it may be seen that, under certain circumstances, a rib may be more likely to bend, than to follow the motion of its neighbor, and the difference in elasticity in the different parts of the costal arch, tends to complicate the problem. Let it be remembered, that the ribs form parts of larger circles from above downward, and that in the upper part of the chest, each arch is in all positions outside of the one above it; and let it be remembered, that, besides the motion of rising and falling from the spinal column, the ribs have a rotary motion on a longitudinal axis. Now, in the upper part of the chest, both sets of fibres must pass outward and downward, so that their action might be represented on Hamberger's bars by turning the latter at right angles to their usual position, and putting the elastic bands in the place of those representing the external intercostals, namely, running downwards and away from the fulcrum. Thus, in the upper part of the chest, both layers must tend to raise the ribs. It has been said, with apparent justice, that mathematics furnish no safe guide when applied to the animal economy, and that we should look at nature and see what the fact is, rather than argue what it ought to be; but in this case, such reasoning is more plausible than true, for observation is very difficult, and vivisectors disagree in what they see; some claim to have observed the phenomena as they should be according to Hamberger, but others, and perhaps the more reliable, do not.

Moreover, observations on human beings are impossible, except under pathological conditions which almost necessarily affect the mechanical relations of the parts, and in lower animals the conditions are never the same as in man. Hence it is not unfair nor overhasty to declare Hamberger's views false in theory, and unconfirmed by observation.

At this point, I would call attention to some anatomical considerations before proceeding. The two layers of the intercostals form a double covering to the contents of the thorax, from the angles of the ribs to their cartilages; behind and in front, respectively, of these points, other muscles are found, to prevent any loss of power to counter-balance atmospheric pressure, to wit, the long muscles of the back behind, and the pectoralis major and external oblique in front. The internal oblique is not only in the same plane, but absolutely continuous with the fibres of the internal intercostals in the three or four lower spaces. Coming from the transverse processes of certain cervical vertebræ, we have three muscles called scaleni, two going to the first, and one to the second rib. In a continuous series with the scaleni, come twelve triangular muscles from the transverse processes of the seventh cervical and eleven upper dorsal vertebræ, to the ribs between their tubercles and angles, and continuous with the fibres of the external intercostals. Arising from the spinous processes, come next the two posterior serrati; the superior passing downward and outward, to be inserted into the second, third, fourth and fifth ribs beyond their angles, thus getting a favorable hold to draw them backward, and also to raise them in part by rotation on the antero-posterior axis. The inferior serrati extend upward to the four lower ribs, in a manner to draw them downward and backward. The quadratus lumborum forms part of the posterior wall of the abdomen, its fibres passing upward to about the inner half of the last rib, which it draws downward and backward. The action of the erector spinæ has a considerable influence on the shape of the chest, and the fibres of its outer division have a special action on the ribs. Its lower part (the ilio-costalis lumborum) sends fibres to the angles of the six or seven lower ribs, in a manner to draw them backward and downward, or at all events to hold them firmly. The upper part (cervicis*) will have a similar effect by drawing the superior ribs upward, and the middle part (dorsi*) will keep all tense by drawing the more movable toward the more fixed.

Leaving the intercostals for a moment out of the question, the combined action of the muscles just enumerated will be, while the erector straightens the spine, to draw the upper ribs upward, the lower downward, and the posterior part of all of them inward in a manner to enlarge the thorax transversely. The diaphragm remains to be considered; it has its firmest attachment to the spinal column, and a less fixed one to the circumference of the lower outlet of the chest. The central tendon is attached to the lower layer of the pericardium, and it is to be borne in mind that this is movable only to a certain degree, after which it acts as a fixed point.

With regard to the nervous supply, the most striking fact is that the diaphragm is supplied by two nerves (the phrenics), which arise chiefly from the fourth cervical, apparently to secure the chief muscle of respiration from the effects of an injury to the back. The intercostal nerves supply not only both intercostals, but the levatores, the triangularis sterni, the subcostals, and, according to Riedlaender, the posterior serrati. That a nerve of the size of an intercostal should supply two muscles, part of one of which is antagonistic to the other and to the other part of itself, and that it should stimulate the antagonists to alternate action, is an anomaly of the most startling kind; there is no parallel case to be found in the body.

Perhaps the fundamental error in most views on the action of these muscles is, that it is held to be a definite one—always the same. This is not correct in this case, if, indeed, it be in that of any muscle. The mechanical function of a muscle may be said to be that of bringing, by its contraction, its two ends nearer together—drawing the more movable attachment to the more stable one. Let us take the biceps as an illustration—its usual action is to draw the hand towards the head; but let the hand be fixed, and it will draw the head toward the hand. Few muscles act alone; and the action of the biceps will be hindered or assisted by the contraction of others. Few if any points in the body can be spoken of as absolutely fixed; the hyoid group affords good examples of muscles whose chief duty it is to hold a structure steady to give support to others during their action; any uncommon contraction or relaxation of the former must affect the whole process. Besides contractility, muscles have also some elasticity, and, under certain circumstances, act purely as ligaments.

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* According to Henle's nomenclature.

The blending of other muscles with the intercostals, particularly with the lower internal ones, goes far to prove that they can hardly have a purely independent action.

Far more astonishing than the difference of opinion about the intercostals, is that concerning the movements of respiration, and more especially the relative mobility of the ribs. Omitting all history, I would give the following as my conclusions, derived from the study of the movements in adult males. In the first place, it should be understood that the movements are not the same in all persons, and that in any person a slight cause is sufficient to modify the nature of the respiration. In the adult male, quiet respiration is almost purely abdominal; when the individual is sitting quite at rest, it is often nearly impossible to detect any movement in the thorax. When the chest takes part, the lower ribs are the first to be affected. Very delicate observation shows that they are for a moment fixed, and then drawn backward and outward, apparently to give greater firmness to the lateral attachments of the diaphragm, and then, if the inspiration should have been strong enough to raise the upper part of the thorax, they may follow the other ribs; but this I believe not to be their primary movement. In forced inspiration, the lower ribs are sometimes drawn decidedly inward.

The first rib is undoubtedly sometimes raised, but this is the point in which I am inclined to think there is the greatest individual variation. The amount of rotation is probably greatest from the sixth to the eighth. In an inspiration but very little stronger than usual, there is a tendency to straighten the spine, which is very marked if the inspiration be forced; this is not only, as Mr. Hutchinson has shown, to allow the ribs to widen the intercostal spaces as they rise, but also to give a firmer origin to the scaleni, the levatores, the serrati and the strips from the erector spinæ.

It has been shown that all these movements can take place without any assistance from the intercostals, other than that of dragging one rib after another as ligaments might do. Küss accounts for their arrangement in two oppositely oblique layers by the fact that thus, in any position of the ribs, one is always on the stretch, which no doubt is necessary for proper resistance to atmospheric pressure. But though the motions of respiration may be performed without their assistance, it does not follow that they do not even normally take a part.

To gain some observation of the action of these muscles, I irritated them by striking and by galvanism, just after death, in a dog in which the costal cartilages of one side had been divided close to the sternum. The galvanic irritation was made by putting the two wires of the battery in a vertical line at each edge of the same intercostal space. The effect was to bring the two ribs together—the lower sometimes almost overlapping the upper. On cutting away the external intercostal, the same result, though in a less degree, was obtained.

Wishing to see the normal action of these muscles in a dog, although holding that the results would not necessarily apply to man, I had recourse to a vivisection, for the success of which I am greatly indebted to Dr. Amory. A dog was etherized, bound down on its back, and one side of the chest laid bare. The opening, during inspiration, of the angle between the bony ribs and cartilages in the thorax was beautifully shown, and it was evident that the fibres of the intercostals were continually changing their condition. Just what these changes, however, might be, and just when they occurred, were unexpectedly difficult points to settle, and the difficulties were so great that I am inclined to look with increased doubt on the confident assertions of some authors.

I came to the conclusion, that the external intercostals, and the internal ones between the cartilages, did contract during inspiration; but the contraction was very slight, and the doubt grows stronger in my mind whether the bulging attributed to contraction was not really the relaxation caused by the approximation of the ends of the fibres. The lower ribs were fixed and often drawn a little backward at the beginning of inspiration, but in spasmodic inspiration were drawn directly downward. Galvanism was applied between the long ribs, as in the former experiment, with both muscles intact, and sometimes with one, sometimes with the other layer divided. In all these cases the ribs were drawn together. When the internal intercostals between the cartilages of some of the higher ribs were galvanized during inspiration, the superior one ceased to ascend, and the inferior was drawn towards it. If one of the lower ribs was held fast and the muscles galvanized above it, the ribs above were drawn down.*

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* Since reading this paper, I have had an opportunity, by the kindness of Dr. H. P. Bowditch, of repeating the experiment, with his coöperation. The only modification of importance was the section of the pneumogastrics, towards the end of the experiment, in order to make the respiration slower and more particularly thoracic. The results were identical with those of the other experiment, but I satisfied myself that my first impres-

Hence I concluded, first, that the action of the intercostals during ordinary respiration is very slight, if, indeed, there be any, other than ligamentous. Second, that for reasons given in an early part of this paper, both sets, at the upper part of the chest, tend to raise the ribs. Third, that owing to the fixing or drawing down of the lower rib, both sets in the lower part of the chest may tend to draw the ribs downward. Fourth, that by sudden contraction, drawing ribs together, they are muscles of spasmodic expiration. Fifth, that position, muscular action, disease, deformity, and various slight undefinable causes, may modify the action of any part of them.

N. B.—The writer would refer the reader to Professor Humphry's lecture, in the *British Medical Journal*, June 29, 1872, to Professor Cleland's paper, in the *Journal of Anatomy and Physiology*, vol. i. p. 209, and to Dr. Arthur Ransome's remarks in the *British Medical Journal*, Oct. 26, 1872. As the writer's views, except in some matters of detail, are nearly the same as those of the last-named gentleman, he would state that this paper was almost finished before he was acquainted with that of the latter.

A Criticism on the Vague Use of Terms.—In perusing the productions of medical writers, one is apt to be struck with the frequent use of terms which convey no definite idea, or which put assumptions and hypotheses for truth or fact. "Blood poisoning" has come to be a very convenient expression with which to cover up doubts and obscurities. We talk fluently of "cell-life" and its destruction by morbific agents, often using the terms, it may be, to conceal ideas rather than to give them a clear expression. "Malaria" is an invaluable blessing to our literature, enabling us to bridge over a thousand dark chasms into which neither our eyes nor our microscopes can penetrate. In talking with patients, the free use of such terms may be well enough. Unprofessional people must have explanations, and they seem to understand technicalities about in proportion to their ignorance of strict science. But among ourselves, in our discussions and lectures and writings, there is room for caution in this respect. Even when the writer may have a clear idea of his own meaning, the reader may not, or he may give a different meaning. Taking the three expressions which we have chanced to use in illustration, "blood-poisoning," "cell-life," and "malaria," let any half-dozen medical gentlemen compare notes as to their meaning, they will all doubtless agree up to a certain point. But when it comes to the application in specific cases, the difference would show out painfully. If *faith* were a handmaid of science, as she is of religion, there would be no great difficulty. We might talk after the manner of acknowledged leaders, and not insist on independent judgment. But in science, doubt and inquiry take the place of faith, and the use of terms in a vague or indeterminate sense is incompatible with strict science.—*Pacific Medical and Surgical Journal.*

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sions were right concerning the contraction of these muscles. I never succeeded in demonstrating the contraction of the internal intercostals between the bony ribs during expiration. It should be stated that none of these dogs were allowed to awaken from anæsthesia.

Progress in Medicine.

REPORT ON OPHTHALMOLOGY.*

By O. F. Wadsworth, M.D. Harv.

Anatomy.

Wolfring—Beitrag zur Histologie der Lamina Cribrosa Scleræ. Graefe's Archiv., xviii., ii.

Leber—Bemerkungen ueber die Circulations-Verhältnisse des Opticus und der Retina. Do. do.

Schwalbe—Ueber Lymphbahnen der Netzhaut und des Glaskörpers. Berichte der math.-phys. Classe der Königl. Sächs. Gesellschaft der Wissenschaften. June, 1872.

At the commencement of his paper, Wolfring tells us that his investigations were undertaken in the endeavor to solve the following questions: 1. In what relation does the connective-tissue of the sclera stand to that of the lamina cribrosa (the meshwork extending across the opening in the sclera through which the optic nerve enters the eye)? 2. What is the relation of the vascular anastomosis forming a circle in the sclera around the opticus, to the sclera, the lamina cribrosa and the sheaths of the nerve? 3. What is the distribution of lymph-vessels in these tissues?

As regards the distribution and relations of the bloodvessels, the results obtained by examination of eyes of infants, the vessels of which had been injected with a solution of Prussian blue in glycerine, agree, in the main, with those obtained previously by Leber, and directly confirm them, but are less complete. On one point, however, and that an important one, there is some vagueness in the language used, and a possible discrepancy. In describing the vessels which form an anastomosing meshwork on the inner sheath of the nerve, Wolfring speaks of vessels which come from the brain to take part in this anastomosis, or join the vascular circle in the sclera. It does not clearly appear whether by this is intended merely to indicate the direction those vessels take, or whether they are regarded as of directly intracranial origin. The latter would be decidedly opposed to Leber's views.

Leber has, by renewed investigation, satisfied himself of the correctness of his previously published statements† regarding the bloodvessels of the optic nerve and retina, and refers in this paper to some characteristics of the circulation in these parts, which are of great practical importance in relation to clinical diagnosis. Leber states that the optic nerve along its whole course in the orbit, from the optic foramen to the eye, receives branches from the vessels in its neighborhood; these vessels form a continuous network the whole length of both sheaths of the nerve; the vessels of the two sheaths communicate with each other; and from the network of the inner sheath numerous branches extend into the interior of the nerve, running within the connective-tissue septa which enclose the bundles of nerve fibres. At the optic foramen, the vessels of the inner sheath anastomose with those which belong to the intra-cranial portion of the nerve. Leber cites a passage from Zinn, published so long ago as 1780, which shows that the anatomical disposition of the vessels just described was familiar to him at that time; Hyrtl, also, in 1839, described arterial branches joining the optic nerve during its intra-orbital course.

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* Second semi-annual Report.

† Ueber das Blutgefäss System des Auges. Zehender's Monatsbl., 1864, Arch. f. Ophthal., xi. 1, 1865.

From the optic foramen to the point at which the central vessels of the retina enter the opticus, its vascular supply comes wholly from the vessels of its sheath; but as soon as the central vessels enter the nerve trunks they also give off branches to take part in the nutrition of the nerve. The lamina cribrosa, papilla, and the immediately surrounding portion of the retina are supplied with branches both from the central vessels and the ciliary vessels; the branches from the latter are derived partly from the arterial circle in the sclera around the nerve, partly from the choroid. Both sets of vessels take part in the formation of a capillary meshwork, and to this meshwork is due the rosy tint of the papilla observed in health. Wolfring confirms Leber's account of the vessels of the papilla and lamina cribrosa, except so far as the branches from the choroid are concerned; of these he makes no mention.

It is evident that such a derivation of the vessels of the papilla as that here given allows but a very indirect communication between them and the vessels of the meninges and brain, and no very accurate deductions as to the condition of the cerebral circulation can be drawn from the amount of vascularization existing in the papilla.

Very different from this account of the circulation in the optic disc is that which was put forth by Galezowski.* He derived the vessels which supply the trunk of the nerve and the papilla directly from the vessels of the arachnoid and brain, and considered them independent of the retinal vessels. According to this anatomical arrangement, the vascularity of the disc was regarded as representing a cerebral vascularity, and certain clinical observations were thus explained. Clifford Allbutt, in his generally admirable work,† adopts Galezowski's views on this point, and states that he has, by his own observation, satisfied himself that Galezowski is mainly right, and that they bear closely upon the phenomena of morbid change as seen by the ophthalmoscope. At the same time, he accepts, in a foot-note, the "connection between the vessels of the nerve, of the retina, of the chorio-capillaris, and of the ciliary systems," as given by Leber. How he is able to harmonize the two views, so widely different, and, admitting the existence in the papilla of a network of branches from the "central" and ciliary vessels, still to regard the blood supply of the disc as coming directly from the brain along the nerve sheath and thus furnishing evidence of the state of the intra-cranial circulation, it is difficult to comprehend.

Wolfring's attempts to demonstrate the existence of lymph-vessels in the nerve and lamina cribrosa by means of injections into the space beneath the dura mater, or that between the two sheaths of the nerve, failed entirely, even though very considerable pressure was made, and injections through a canula thrust into the substance of the nerve gave, also, only a negative result. When, however, the canula was thrust simply beneath the inner sheath, the spaces around the bundles of nerve fibres in the trunk of the nerve and similar spaces in the lamina cribrosa were filled by the injected mass. In sections made on nerves thus injected, the spaces filled appeared as an anastomosing network of canals, communicating with a similar network at the inner surface of the inner sheath, from which pretty large branches passed outward to the lymph-space between the sheaths. These canals seemed to be entirely distinct from the network of bloodvessels in the nerve, inasmuch as they were situated immediately around the nerve-bundles, while the bloodvessels, though having the same general distribution, lay in the interior of the septa between the bundles and thus were separated from the lymph-vessels by a pretty thick layer of connective tissue. The endeavor to inject both blood and lymph-vessels in the same nerve failed. Wolfring describes, also, on sections of nerves previously hardened and colored with carmine, numerous lymphoid corpuscles, situated partly in the connective-tissue septa enclosing the nerve-bundles, partly within the bundles themselves. Farther on, he states that in injected preparations, these corpuscles were seen, not only in the injected lymph-canals, but also in the tissue outside of them, as well as among the enclosed nerve fibres. Leber, in his paper, refers to this point, and suggests the probability that these so-called lymphoid corpuscles are really the connective-tissue cells formerly described by him.* A comparison of the plate given by Wolfring to show the corpuscles with a section of the optic nerve under the microscope, and with the drawing given by Leber (loc. cit.), renders the almost identity in position of the corpuscles and Leber's connective-tissue cells incontrovertible, while the much greater accuracy of the latter's illustration is manifest.

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* Sur l'Existence de vaisseaux capillaires, d'origine cérébrale, dans la papille du nerf optique. Gaz. Hebdom., No. 51, 1865.

† On the Use of the Ophthalmoscope in Diseases of the Nervous System and of the Kidneys. London. 1871.

Schwalbe's results seem to have differed very considerably from those of Wolfring, though his injections were made in the same manner. The original paper we have as yet been unable to obtain,but give the following abstract of it from the *Monatsbl. f. Augenheilk.*, Jan., 1873. The author tied the trunk of the opticus and thrust a fine canula beneath the inner sheath, between the point of ligature and the globe, and injected through this oil of turpentine colored with alkannin, or Prussian blue dissolved in water. After such injection, the peri-vascular canals around the veins and capillaries, which had been described by His, were found injected; in no instance were vessels corresponding to the course of the arteries filled. The injected fluid spread out, also, some four mm., star-like, in the optic fibre layer of the retina. By the method mentioned, the injected substance also pushes in between the vitreous and the limitans, and passes not infrequently into the central canal of the vitreous. Finally, the fluid reaches, through numerous fine openings, the outer surface of the inner sheath, and so enters the inter-vaginal lymph-space, thereby demonstrating the connection of the injected canals with the lymph system. Mention is also made of the fact that, even on quite fresh eyes, the injected fluid is also frequently found in the parts immediately surrounding the nerve, between the retina and the pigment epithelium. It would seem as if the penetration of the fluid into the latter situation might have been owing to some slight rupture of the tissues rather than to the existence of a normal lymph-space, and it is not evident from the abstract whether the author may not have so regarded it. The statements of Schwalbe must have the more weight, since his previous discoveries of lymph-spaces of the eye have been confirmed by so many observers.

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* Arch. f. Ophthal., xiv. 2.

The lamina cribrosa, according to Wolfring, is not, as has been hitherto considered, a modification of the tissue of the sclera in the form of a meshwork, through the interstices of which the nerve-fibres pass to the retina. He holds that the scleral tissue passes wholly into the nerve sheaths, leaving a simple opening for the passage of the nerve. The connection between the nerve and the sclera is due to the numerous anastomoses of their respective blood and lymph-vessels, and the connective tissue of the lamina is derived wholly from the perineurium of the nerve and the adventitia of the bloodvessels.

Retina of the Night-Apes.—Max Schultze (*Central-Zeitung,* Dec. 4, 1872) has found fresh evidence in favor of his views regarding the special function of the yellow pigment in the macula lutea, and of the cones in the rod and cone layer, viz., that the yellow pigment, by absorbing the rays from the two ends of the solar spectrum (specially the violet end), renders the light falling upon the percipient elements of this part more achromatic; and that the cones alone and not the rods serve for the perception of color. This he infers from an examination of the retina of the Brazilian night-ape, nyctipithecus felinus.

Schultze reported the result of his examination at the July meeting of the Niederrheinische Gesellschaft für Natur-und Heilkunde in Bonn. In connection with the investigations of the peculiarities of the retinas of night-waking animals which he had previously made, the examination of a night-ape offered special interest. All day-apes possess a macula lutea and fovea centralis, containing cones alone in the percipient layer, as in man; the previous examinations of night-animals made it, however, probable that in the night-apes the cones, and at the same time the macula lutea and fovea centralis, would be wanting.

This supposition proved correct. Nowhere in the fresh retina was there any yellow pigment, nor any cones. The percipient layer consisted entirely of rods, considerably thinner and longer than those of man. This layer had the same structure in the posterior portion of the eye where the visual axis cuts the retina, as in the equatorial regions. Fovea centralis was wanting, as well as macula. The outer granule-layer was of considerable thickness, on account of the numerous layers of rod-granules, as is always the case when there are no cones and the rods are very thin; the outer fibre-layer of Henle, the existence of which depends on that of the macula, was not present. In all parts of the retina there was only a thin single layer of ganglion-cells.

Physiology.

F. C. Donders.—Ueber angeborene und erworbene Association. Graefe's Archiv, xviii. 2.

J. Samelsohn.—Zur Frage von der Innervation der Augenbewegungen. Ditto.

Dr. L. Mandelstamm.—Beitrag zur Lehre von der Lage correspondirender Netzhautpuncte. Ditto.

Whether the association of movement of the muscles of the two eyes is congenital, i. e., dependent on anatomical arrangement, or acquired by the individual, has been the subject of much discussion. Helmholtz on the one side, and Hering on the other, have been the leading opponents in the controversy. The former maintains the acquired nature, the latter the anatomical source, and, therefore, necessity of the phenomenon; each, however, admits certain modifications of his theory. Adamük, from the result of experiments on dogs and cats, in which different portions of the corpora quadrigemina of either side were stimulated by an electrical current, concluded that the connection between the movements of the two eyes is due to a mechanism arranged to this end, and ranges himself, therefore, on the side of Hering.

Donders does not wholly agree with either of the above views, but takes a middle ground. He considers that the production of convergent squint in hypermetropia must be regarded as a proof that the independence of convergence and accommodation is congenital. On the other hand, the so-called relative accommodation and the changed relation between convergence and accommodation which exists in myopia and hypermetropia show that the interdependence is not absolute, but may be modified by practice. The modification is, then, acquired. Donders is a firm upholder of the development theory; in his view, both what is congenital and what is acquired is the same in nature; the congenital is the result of practice in former generations, the acquired of practice in the individual; each must have an anatomical basis. The effect of practice is to modify the anatomical structure. Has the practice of former generations been uniform in any particular, so will the practice of the individual be of less avail in overcoming it. In the lateral movements of the eyes, a certain amount of independence has always been necessary, and accordingly the individual may vary the relation between the action of the lateral muscles considerably; but with the vertical movements it is different, the practice has been pretty uniform, and the individual can do but little against the weight of inheritance. The experiments of Adamük show only that certain groups of cells call forth corresponding contraction in the muscles of both eyes; the will, by which the action of these cells could be modified, and the organizing influence of which on the cells is far different from that of an electrical current, had no part in the production of the phenomena observed.

Samelsohn discusses a case of oculo-motor paralysis of one side, in which the varying relations in the action of the muscles of the two eyes during gradual recovery from the paralysis were carefully observed, and showed a marked degree of independence. His conclusion, from study of this and other cases is, that the centres of movement of the two eyes are separate, and act together only in the interest of single vision; so soon as the conditions for this are changed, independent action can, under certain circumstances, occur.

Mandelstamm concludes, as the result of experiment, that the so-called identity of corresponding points in the retinas of the two eyes is not based on a preformed anatomical arrangement, but acquired through experience. In agreement with the fact that we habitually pay more attention to objects situated below us than to such as are to one side, and comparatively seldom observe objects above us, the harmonious correspondence of the two retinas was found to be greatest in the upper, less in the lateral, and least in the lower portions.

Influence of Lenses on Vision.—Donders, besides the paper which has been noticed above, contributes another to the same journal on the influence of lenses on the sharpness of vision. It would demand more space than the limits of this report will allow to attempt to give his reasoning in any detail. He shows that, while the influence which a particular lens exerts on the sharpness of vision of an eye of given refractive power may be found by calculation, it is an absurdity to undertake to show by calculation what the normal sharpness of vision should be in the various degrees of ametropia.

Color Perception.—Schirmer gives, in the *Berl. Klin. Wochen.*, Feb. 3, 1873, the result of investigations on the perception of different colors. He found that for each pigment-color there is a special district around the fixation point in which it is correctly made out. These different districts are bounded by irregular horizontal ovals, and extend farther toward the temple than inward. The district in which green is perceived as such is the smallest; then come red, purple, violet and orange, while yellow and blue are distinguished still farther toward the periphery. Around the green "field" is a pretty broad zone, in which green appears yellow; around the red field a narrower zone in which it appears yellow; around the purple and violet fields are zones in which these colors are seen as blue; outside of the zones the various colors appear bright or gray on the dark background. Yellow and blue are made out beyond all these zones (blue farthest), and they alone retain their color so long as they are visible. The size of the color-fields and zones is only relative, and must be measured with retinal images of equal size; if larger retinal images are obtained, the size of the fields and zones is greater. Schirmer concludes, therefore, that blue and yellow are the chief color sensations; the greatest energy for color-perception is required for green, then for red, &c.; *a priori* reasoning from the above facts would lead to the supposition that, with the progressive decrease of perception of color in atrophy of the optic nerve and retina, the different fields and zones in which the various colors are distinguished must, in equal degree, gradually contract, till they finally disappeared in regular order. This, Schirmer found to be the case. Green disappears first, then red, but both are still perceived over a small field as yellow; the other colors follow the same rule; yellow and blue are known longest, and, finally, before all color perception is gone, blue alone is made out close to the fixation point.

Passage de Venus sur le Soleil is the title of an interesting paper by Giraud-Teulon in the *Annales d'Oculistique,* July and August, 1872. The occasion of the article was the publication of a paper read before the Association Scientifique de France, by M. Wolf, of the Observatory of Paris, in which he endeavors to explain the cause of the difficulties astronomers have met with in determining the exact instant of contact of the borders of the planet and the sun. This difficulty has been caused by the appearance between the borders of the two bodies, at the moment they have approached very near to each other, of a spot known as the "*ligament noir.*" It has not been seen, however, by all observers. M. Wolf considered the production of this disturbing appearance due to aberration of sphericity in the lenses employed.

Teulon, however, convinced himself that spherical aberration cannot produce, though it may increase the phenomenon; the true cause is to be sought in some defect of the refractive condition of the observer's eye; with the correction of this the difficulty would disappear. He points out the ignorance shown by M. Wolf of the advances in physiological optics during the last two decades, and ends with a lament that in this important branch of science France stands at least fifteen years behind her neighbors.

Physiological Import of Iridectomy.—Exmer (*Wiener med. Zeitung*, No. 21, 1872) brings forward a new theory as to the cause of the decrease of intra-ocular pressure produced by iridectomy. He performed the operation on rabbits and found that the division of the arteries of the circulus arteriosus iridis major gave rise to the formation of considerable anastomoses, and it appeared that in this way the pressure of the blood in the vessels was diminished. This formation of anastomoses and consequent decrease of intra-vascular pressure, he believes, explains the lessened tension of the globe found after iridectomy, since Donders has shown that the intra-ocular pressure tends to regulate itself by preserving the balance between the intra-ocular fluid and the fluid in the bloodvessels.

(To be concluded.)

RUPTURE OF THE AXILLARY ARTERY IN AN ATTEMPT TO REDUCE A DISLOCATION OF THE SHOULDER.—This unusual accident is reported by Prof. Joseph Lister, and happened in the case of a man 58 years of age, who, eight weeks previously, had met with a fall, producing an ordinary subcoracoid luxation of the humerus. In the course of a somewhat prolonged attempt at reduction (under chloroform), the limb was raised forcibly upward, in order to obtain the leverage afforded by having the acromion as a fulcrum, at which juncture a snap was heard as if of something giving way. Shortly afterward, efforts at extension having in the meanwhile been kept up, an enormous swelling suddenly appeared below and behind the axilla, almost as large as an adult human head, evidently due to a sudden extravasation of blood. Prof. Lister now lost no time in having the patient placed upon the table, when he proceeded to cut down upon the injured artery, exposing the seat of the orifice. The artery was then tied, both above and below this orifice, and the head of the humerus removed so as to permit reduction into the glenoid cavity. Death ensued three hours after the conclusion of the operation.

The results of the *post-mortem* examination were sufficient to explain the accident. In the first place, the walls of the vessel had been weakened by atheromatous degeneration, which was present to a marked degree. Secondly, the head of the humerus was found to be partly surrounded by a mass of osteo-fibrous tissue, forming bands and spiculæ, designed by nature to form a partial capsule for the new joint, but which had become intimately connected with the axillary artery, so as to firmly attach that vessel to the humerus and also the coracoid process. Violent traction having been applied to the artery between these two points, the weakened vessel naturally enough gave way.—*Edinburgh Medical Journal*, March, 1873.

Reports of Medical Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. F. B. GREENOUGH, M.D., SEC.

JAN. 13th.—*Lithotomy.*—Case reported, and the stone exhibited, by Dr. CABOT.

The patient, a carpenter, 30 years of age, was born in England, and had been in this country and city for about three years. For ten years, at least, he had been subject to a burning, stinging sensation in the glans penis at the end of micturition, and occasionally at other times, but there had been no other local symptoms, and otherwise his health was good.

Nine months ago, he fell asleep in the evening, and whilst heated, near an open door, and slept for over an hour. That same evening, he passed from the bladder, and without pain, from one to two gills of fresh blood, and two days afterwards about as much more. After this attack he became much worse, and his sufferings progressively increased. The pain was very much increased by riding in any kind of a jolting vehicle, but not by walking, and often came on suddenly while he was at work, so that he was obliged to stop at once. Urine passed more frequently, and, for about three weeks after the hæmaturia, as often as every ten or fifteen minutes; with much sediment, and sometimes being suddenly stopped by the pain. Last June, and for about two months, he had pain in the perineum, but at no other time.

Three weeks before his admission into the hospital, something seemed to give way, and he passed a "gritty matter," which he had never before observed. This was followed, for about eight or ten days, by a puriform discharge, and with it a small clot of blood about the size of a pea. For some days he was obliged to pass his water every few minutes, but on admission he could retain it for an hour and a half; micturition being sometimes accompanied by a small and involuntary discharge of fæcal matter.

Meanwhile his health was pretty good, and he had worked until the last three weeks; but he had lost flesh, and his appetite was rather poor.

Nov. 21st, 1872, he entered the Massachusetts General Hospital, and gave, essentially, the above report of his case. His general appearance is that of an intelligent and temperate man, and though his figure is small, he looks, at least, sufficiently healthy. The urine was quite albuminous, and there was a heavy sediment, with pus corpuscles.

On the 23d, Dr. Cabot attempted to crush the stone, but finding it impossible, he removed it by the usual lateral operation. The wound was then closed with a sponge, after the introduction of a catheter, and a water-dressing was applied.

On the 24th, the man was doing well, and the sponge was removed; on the 25th, the catheter was removed, and, on the 28th, oxide of zinc and starch was substituted for the water-dressing, on account of an eczema that had appeared. Dec. 2d, some of the urine came through the penis, and on the 5th he reported that it all passed that way during the day, though a little leaked through the incision at night. Eczema nearly gone. This was the last record of any discharge through the perineum, and, on the 5th of January, he left the hospital, with the wound very nearly healed; the relief to his sufferings having been complete since the time of the operation.

The calculus, which weighed, a few days after removal, one ounce and five grains troy, is of the form of a flattened sphere, about one inch and one-third in diameter and about two thirds of an inch in thickness. External surface presented prominences which were very marked, from about one to four or five lines in diameter, regularly rounded, and without any appearance of that aggregation of little granules of which they are so often made up in the mulberry calculus. Surface encrusted with an opaque, dirty-white deposit, about the thickness of blotting paper; and this having been broken off in some parts, probably in the removal of the stone, the dark structure beneath is exposed. The calculus having been sawed, one-half has been polished, and the appearances that it presents are very unusual and beautiful. The outer half is imperfectly but very decidedly lobulated; the rounded termination of the lobules forming the prominences upon the surface, and being gradually lost towards the centre of the stone. The structure, as a whole, is hard and compact, and the cortical portion of the lobules, as it may be called, is particularly so. On close examination, these last are seen to be finely laminated, and the laminæ are traversed by other lines that are less distinct, and that run from the central portion towards the circumference. The cortical portion of the lobules is of a rich, though not intensely, dark-brown color. The color of the central portion, which constitutes a small part of the whole lobule, is much lighter, and in some of them is quite imperfectly developed. The thin concentric, or parallel laminæ, however, are very distinctly continued in several of them, though the intervening substance is not completely filled in. The remainder of the calculus is of a brownish color, varying in depth, but nowhere so dark as the cortical portion of the lobules. In structure, it has a somewhat nodular or coarsely granular appearance, and suggests the idea of a section of the knotted root of a tree; and this extends up towards and more or less into the central portion of several of the lobules. In the very centre of the stone is a nucleus, about two by four lines in diameter, but this is scarcely visible upon the polished half of the calculus, but perfectly marked upon the other.

The chemical analysis of this specimen, as determined by Dr. Edward S. Wood, Professor of Chemistry in the medical school, is as follows. Nucleus; uric acid, with considerable phosphate of lime and triple phosphate. Central portion; principally oxalate of lime with some phosphate of lime and triple phosphate. External crust; principally phosphate of lime; a little oxalate of lime and triple phosphate.

Second Case of Lithotomy.—Dr. Cabot also showed a calculus that he removed from a little boy, 7 years old, in the year 1862. The patient entered the Hospital Sept. 22d, with phymosis, and complaining only of a dribbling away of the urine. On the 23d, he was circumcised, and as there was some suspicion of a stone, the sound was passed and one was felt. The operation was at once performed, and he did perfectly well from that time, except the phymosis, which subsequently required and was relieved by an incision. Sept. 27th, the urine passed wholly by the penis. Oct. 5th, the wound in the perineum had nearly closed, and on the 18th of November he left the hospital.

The calculus is of an irregular and somewhat conical form, one inch in length, and about one inch and one-third in diameter. Not analyzed, but looks, from the exposure of the nucleus, as if it may be a uric acid calculus, with a phosphatic coating about it. Both calculi are in the Cabinet of the Society for Medical Improvement.

JAN. 13th.—*Melanotic Liver.*—Case reported by Dr. LYMAN.

C. A., Swede, æt. 40, blacksmith, entered City Hospital Dec. 15th, 1872. Parents died of old age. His general health has, until recently, been good. Three years ago, had tumor in left eye, for which the organ was removed by Dr. Derby.

Two months since, he fell while carrying a heavy weight. This was followed by pain in right hypochondrium, which has continued, but gradually increasing in severity.

Five weeks since, first noticed swelling in region of liver. Liver now extends across abdomen from crest of right ilium an inch above anterior superior spinous process, obliquely across through a point an inch below umbilicus. The lower edge sharp and well defined, like lower ribs. Has recently had piles, and some hæmorrhage ; no ascites or anasarca. Urine contains abundance of bile ; nothing else abnormal. Appetite poor and food distresses. Bowels move daily. Pulse 72. Temperature 99½°.

25th.—Somewhat jaundiced ; some ascites ; a thin layer of fluid between abdominal wall and liver.

30th.—Pain continues severe, especially at night.

Jan. 5th.—Had chill in the night, sweating profusely in morning ; deeply jaundiced.

8th.—Had frequent attacks of epistaxis and hæmatemesis the past two weeks.

10th.—Sleeps most of the time, induced by morphine, taken for the constant epigastric pain and occasional coffee ground vomiting.

12th.—Groaning in his sleep, and delirious.

13th.—Death.

Autopsy by Dr. Webber.—(Left eye wanting.) Brain.—Over vertex, pia mater much more thickened than normal, and œdematous. The centre of greatest change rather posterior to vertex, and the change extended anteriorly, laterally and posteriorly over both hemispheres, following course of vessels. Substance of brain healthy. Left optic nerve about one half the size of the right, translucent, and contained a very small portion of normal nerve fibres, perhaps not more than one per cent.

Seen under microscope, showed round and fusiform cells, with large nuclei ; fibrous stroma was in places arranged in tolerably regular alveolar net work, in other places very irregular, twisted together ; many round, fusiform cells pigmented.

Both lungs seemed healthy, except small spots of extravasated blood under the pleura, and a few spots, possibly hæmorrhagic, in lung substance. There were one or two masses of pigmented tissue, which may have been of the same character with the liver growth ; seen by gas-light, they seemed to be such.

Heart healthy. On anterior surface of mediastinum, two or three enlarged and dark-colored glands.

Liver weighed fourteen pounds three ounces. It was filled with melanotic sarcoma. Its surface nearly smooth, only slightly nodulated. Part of disease very strongly pigmented. Glands of neighborhood enlarged and somewhat pigmented.

Stomach.—Mucous membrane black in several spots, in size from one-fourth to three-fourths of an inch in diameter; at which points, tissue seemed thickened, but no nodules.

Spleen, kidneys, and intestines, so far as examined, healthy.

Dr. JACKSON said that he had never seen so large a liver. The form of the disease was also peculiar, the whole of the liver appearing to be more or less affected. Inasmuch as melanosis is usually so generally distributed throughout the organs, it is strange that, in this case, the disease should be confined to the liver. He spoke of a woman who had had an eye removed for melanotic disease, and lived eight years. After death, melanotic deposits were found in almost every organ.

Dr. FITZ also thought it strange that the other organs were not diseased in this case. He referred to a case where the disease had extended from the eye backwards to the brain. The fact of the liver containing considerable pigment, in its normal condition, may account for its liability to melanotic disease, as is the case also with the choroid. The fact of a tumor being melanotic does not necessarily show that it is malignant, as all new formations may contain pigment cells.

JAN. 27th.—*Purulent Pericarditis and Parenchymatous Nephritis.*—Dr. MINOT reported the case.

The patient was a young Englishman, 24 years old, of good habits, a groom in a gentleman's family. Without any known cause, he began to complain of not feeling well, but without definite symptoms, about Jan. 15th. He had some pain in the chest on the 17th, but on the 18th and 19th he was up and dressed, and apparently nearly well. At 1 o'clock on the morning of the 20th, he was awakened by a rigor, which was immediately followed by agonizing pain in the *right* side of the chest, requiring repeated subcutaneous injections of morphia to render it endurable. The pulse, which at first was only 84 in the minute, soon became rapid, and remained at about 144 as long as the patient lived. There were no physical signs noticed which would indicate disease within the chest. No deficiency of respiratory murmur anywhere, no dulness, no râles, no cardiac murmur, or friction sound. The heart, however, was not particularly examined, as no disease in that organ was suspected. In the course of the day, the pain shifted to the epigastrium, where it remained. Considerable tenderness was found just below the xiphoid cartilage, and the diaphragm scarcely moved during respiration; it was, therefore, conjectured that the disease was peritonitis, possibly caused by perforation of the stomach or intestine. On the other hand, there was no tenderness in any other part of the abdomen, no meteorism, no vomiting, no constipation. On the morning of the 21st, the patient was pulseless, the skin was mottled, the extremities livid, and he died at noon, having had, an hour previously, a natural and spontaneous movement of the bowels. The mind was clear throughout. There was no dyspnœa at any time, and no pain referred to the region of the heart.

The *autopsy* was made twenty-six hours after death, by Dr. FITZ, who furnished the following report:—

Pericardium contained about twelve ounces of purulent fluid, with but few fibrinous flocculi. The visceral and parietal layer of the pericardium thickened slightly, roughened, opaque, rather velvety than shaggy or villous. Near the apex of the left ventricle, posteriorly, a small amount of yellow fibrine of gelatinous consistency, was moderately adherent. The heart substance firm, but pale. The valves and cavities apparently normal.

Lungs emphysematous from *post-mortem* decomposition. Spleen small, pale, grayish-red, soft, not grumous.

Kidneys rather small, flaccid, of a uniform reddish tint, probably from decomposition. Capsule readily detached. On section, a somewhat greasy lustre, the region of the convoluted tubes opaque, dirty white, irregularly minutely beaded. Under the microscope, the convoluted tubules contained a minutely granular mass, completely obscuring the nuclei. Acetic acid made the tubes somewhat clearer by dissolving a limited number of the granules.

At the anterior portion of the longitudinal fissure of the liver, bridges of recent fibrinous coagula extended across between the two lobes. Recent adhesions were also found throughout the longitudinal fissure, quite abundant in the immediate vicinity of the inferior cava, as it perforated the diaphragm, and on the upper surface of the liver in the immediate vicinity.

The intestinal canal presented no abnormal appearances.

Diagnosis.—Purulent pericarditis and parenchymatous nephritis.

Dr. FITZ showed the heart from a case of death unconnected with cardiac disturbance.

Old fibrous adhesions were seen between the left ventricle and the opposed parietal pericardium, corresponding in position with the recent adhesions seen in Dr. Minot's case. As a result of these, apparently, considerable hypertrophy of the left ventricle had taken place, the condition of the heart and other organs not permitting any other explanation of the increased thickness of the ventricular wall.

JAN. 27th.—*Croup; Tracheotomy; Recovery.*—Dr. SWAN reported the case and showed the specimens.

H. L., æt. 4 years and eight months, a well-nourished, healthy-looking boy, had symptoms of spasmodic croup on the 5th inst. He had already had four entirely distinct attacks, the first having occurred at the age of 17 months, the last in April, 1872, for which I saw him. It terminated in a mild bronchitis of two weeks' duration. The father, when a boy, nearly lost his life by what is supposed to have been membranous croup. The spasmodic attack of the 5th instant had been preceded by a sore throat, with enlarged cervical glands, of ten days' duration, but terminating, apparently entirely, some three weeks before the attack, nothing having marked the interval, except, perhaps, a slightly inferior condition of the general health. The spasms occurred and continued for a while, principally at night, and the days were pretty comfortable. There was some febrile movement the first forty-eight hours, during which the pulse reached, at one time, 120. In about five days, i. e. the 10th inst., the voice was reduced to a husky whisper, phonation being quite exceptional, and, when occurring, very high-pitched and unnatural. The dyspnœa, which had been intermittent and concerned principally with the inspiration, now became constant, though varying in degree, and the expirations were also forced and audible. Deep epigastric depression occurred with every inspiratory act. The cough was dry and painful, and signs of distress were too apparent. On the 11th, the chamber was imperfectly supplied with steam, but on the following day a regular and abundant supply was begun, and this was maintained throughout the principal part of the treatment. The disease progressed from bad to worse, the greatest dyspnœa being in the night, but the color had continued good till the morning of the 13th inst., about the eighth day from the first attack of dyspnœa. On that morning, there was marked lividity of the hands and face, and the patient lay upon his side, exhausted. While preparations were making for tracheotomy, I was suddenly called, and saw that he had ceased to breathe. Faint pulsations of the heart were still audible to the ear placed upon the chest.

There was neither time nor occasion for ether. The trachea was at once opened, and a double canula inserted. Artificial respiration was begun by blowing directly through the canula, and after five or six inflations the natural breathing began, and in a little while the child was restored to consciousness. A fibrinous cylinder, cylindrical for an inch of its extent, was immediately thrown off through the tube, and this was the first ocular evidence that any such deposit had occurred, the throat having been found perfectly clean whenever examined, although the fauces had a tumid look, with narrowed isthmus. On the following day, another cylinder, similar to the first, though perhaps narrower, was thrown off through the tube, after a struggle which threatened suffocation. At other times, small fragments came away without special effort. The patient went on well after the operation. The secretion of thick, tenacious, semi-purulent mucus, which seems to mark the favorable cases, as distinguished from the watery secretion which spatters out through the tube in the unfavorable ones, continued copious and essentially the same in character throughout, occasioning, at times, not a little trouble to the patient in his spasmodic struggles to get rid of it, and to the attendants whose duty it was to keep the canula clear. The room was kept at a high temperature—76° to 80°—and the steam was allowed to be always perceptibly felt in the room. Moreover, the lowering of the temperature and the withdrawal of the steam were made a gradual process from day to day. On the 18th inst., five days after tracheotomy, the tube was removed, an hour after the administration of an opiate, and there has been no occasion to return it. For some days afterwards, there were occasional laryngeal spasms, generally connected with efforts at expectoration, and these were at times almost alarming; but it has been interesting to watch the gradual return of function to the larynx, the wound in the trachea meanwhile gradually closing, and the strength, appetite and sleep regularly improving. The wound is now (26th) nearly closed, cough and expectoration at minimum, and voice very good.

JAN. 27th.—*Tuphlo-enteritis after a Fall.*—Dr. C. D. HOMANS reported the case.

A little girl, 7 years old, in perfect health, fell a distance of ten or twelve feet while playing; she was carried home and put to bed, and, after a night of considerable suffering, was seen by Dr. Homans on Sunday, the accident having occurred on Saturday afternoon. She had then much pain in the abdomen, mostly on the right side, but was able and desirous to get out of bed. A cathartic had been given, followed by copious stools. She was placed under the influence of opium, but the next day symptoms of peritonitis had developed themselves, and she died on Thursday, the fifth day after the fall. The tenderness was greatest over the right iliac region during the first days, but spread all over the abdomen before death.

An autopsy was made, twenty hours after death, by Dr. Fitz, with the following result:—

No rigor mortis. Abdomen swollen and tympanitic.

Head not opened. Thoracic cavity presented no abnormal appearances.

Spleen anæmic, of normal size. Kidneys not remarkable. Peritoneal surface of liver presented evidences of recent inflammation. Intestines everywhere united by fibrinous adhesions, easily torn apart. The great omentum spread over and attached to the intestines lying beneath.

A small amount of purulent fluid lying between the intestines, encapsuled by the adhesions. The peritoneal surface in general reddened, covered with false membrane. But little free effusion in the abdominal cavity.

The vermiform appendage bound to the walls of the right iliac fossa posteriorly by recent adhesions.

Perforation had occurred at the lower third, through which a semi-solid fæcal concretion, as large as a bean, had escaped, and was found in the immediate vicinity.

The mucous membrane of the lower third of the appendage was swollen, injected and roughened from recent inflammation.

Dr. Homans said he had reported to the Society a similar case in June, 1867, which was published in the Extracts from the Records; in both cases, the subjects were little girls, and the deaths seemed to depend upon the falls, which had probably caused the inflammatory action to be set up about the appendix.

The Origin of Bacteria.—A correspondent sends us the following:

"When Dr. Bastian, in his much-talked-of book on *The Beginnings of Life*, stated that bacteria appear in hermetically-sealed flasks containing turnip-infusion with a morsel of cheese, the whole of which had been raised to a temperature generally believed to be sufficient to destroy bacteria, there were, and perhaps there still may be, many unbelievers. Similar experiments have been made by others, and the results have been negative. It is a relief to find that at length some competent person has asked Dr. Bastian to demonstrate the truth of his statements. We could scarcely have desired a more efficient witness than Dr. Burdon-Sanderson; and the testimony which he bears to the truth of Dr. Bastian's work is the more striking, because, as he avows, he himself doubted the accuracy of Dr. Bastian's 'statements of facts.' An account of these experiments is given by Dr. Sanderson in *Nature* (vol. vii., No. 167).

"In conclusion, Dr. Sanderson states that he has 'established, at all events to his own satisfaction, that, by following Dr. Bastian's directions, infusions can be prepared which are not deprived, by an ebullition of from five to ten minutes, of the faculty of undergoing those chemical changes which are characterized by the presence of swarms of bacteria; and that the development of these organisms can proceed with the greatest activity in hermetically sealed vessels, from which almost the whole of the air has been expelled by boiling.' It seems to us that we are now simply shut up to one of two statements. Either bacteria, under certain conditions, are generated *de novo* in organic fluids, or the germs of bacteria are not killed by exposure for ten minutes to the temperature of boiling water."

Bibliographical Notices.

American Chemist. A Monthly Journal of Theoretical, Analytical and Technical Chemistry. Philadelphia. 1873. Vol. III. No. 8.

The February number received contains the usual number of well-selected original communications and translations on analytical and theoretical chemistry. This journal, which has only reached its thirty-second number, is the only purely chemical journal of any note in this country, and supplies the want which had so long been felt, of a medium through which our American chemists could impart the results of their investigations, especially in technical chemistry, to each other. In respect to this branch of the science, it compares favorably with any of the foreign journals, the larger number of the articles being devoted to improvements in the various branches of applied chemistry. With subjects relating to physiological or medical chemistry it has little to do.

In the last part of each number is a very complete summary of the contents of most of the English, French and German chemical journals, which adds greatly to its value as a journal for reference. E.S.W.

Transactions of the Obstetrical Society of London. Vol. XIV. 1872. London: Longmans, Green & Co. 1873. Pp. 387.

The published transactions of the Obstetrical Society of London contain some of the very best work and thought of the most distinguished living obstetricians. The present volume is fully up to the standard reached by those of former years. Among many interesting cases are a few which seem to deserve special mention.

Fibro-cystic disease of the Uterus and both Ovaries. Extirpation of the whole. Recovery.—The case was supposed to be ovarian, until a long incision over the tumor had been made, when the operator (Dr. Thomas Bryant, Guy's Hospital) at once recognized the nature of the growth. There were no adhesions. The broad ligaments were secured separately, and the uterus at its neck ligatured in halves. A good strong clamp was also put in, and the tumor excised. No bleeding followed. The wound was brought together, and a morphia suppository given. Everything went on well. The sutures were removed the fourth day. The clamp dropped off the fourteenth. In another week, the parts had united. At the end of the fourth week, she was up and about. The tumor weighed eight and one-half pounds.

Cæsarean Section in 1866. *Subsequent Pregnancy, and Delivery per vias naturales. Recovery.*—In the Obstetrical Transactions, vol. viii., 1867, the operator, Dr. William Newman, reported a case in which, owing to what was then supposed to be epithelial disease of the lower part of the uterus, the operation of Cæsarean section was performed (July 23, 1866), and a child (six and a half to seven months) removed. The mother made a good recovery. January 2, 1872, she entered the Stamford Infirmary, and Dr. Newman delivered her with forceps, July 11, of a living male child at the full term of utero-gestation. The patient subsequently made a good recovery.

Long delay of Labor after the Discharge of the Liquor Amnii.—Dr.

J. M. Duncan gives the details of a case in which there was a partial discharge of the water for forty-five days before labor set in. He also briefly alluded to many other similar cases on record, and advanced the opinion that, as a rule, the delay following the discharge of the *liquor amnii* is only until the evacuation is complete; many of the cases reported being those in which a portion only of the waters escaped. In some, the almost constant dribbling away of the *liquor amnii* is occasioned by a constant new secretion of the same.

Many other interesting cases are reported by members of the Society, and in addition to these the volume contains an unusually large number of papers on subjects connected with the theory and practice of obstetrics.

Dr. J. Braxton Hicks contributes one of the most important papers, his subject being the "Anatomy of the Human Placenta." In it Dr. Hicks divides all the authors who have written on this subject into two classes: those who favor the Hunterian or sinus-system theory, and those who oppose it, amongst which latter class the writer places himself. The paper is most carefully written, and the illustrations are numerous and serve to render the descriptions of the placental sections unusually clear.

Dr. J. H. Aveling gives an analysis of forty-four cases of "*post-mortem* parturition." An extract from this valuable paper has already appeared in this JOURNAL (Feb. 13, 1873).

Dr. Charles E. Squarey contributes an article on the "Causation of acquired Flexions of the Uterus, and their Pathology." In it he endeavors to explain why in two cases, the same causes and conditions apparently existing, an anteflexion is found in the one and a retroflexion in the other. By a careful examination of the normal position of the uterus, and the usual causes of flexions, Dr. Squarey thinks "that when an anteflexion is produced the uterus is, at the time that the cause comes into action, situated high up in the pelvis, occupying its normal position, the axis being forwards, so that any force striking it from above would impinge on the posterior and upper surface of the fundus, and so force it forward and produce anteflexion; that when retroflexion is produced, the uterus has sunk more or less deeply in the pelvis, with the axis directed more or less backward, and in this curve any force striking it from above would impinge on the anterior and upper surface of the fundus, and so force it backwards and produce retroflexion."

Alluding to those cases where the uterus remains in a flexed condition, although no inflammatory adhesions have had time to form, the writer thinks that the flexion is maintained by a loss of tone of the uterine tissue, a loss of tone which, in traumatic cases, is due to some rupture of the uterine tissues. This rupture eventually heals, but in such a way as to maintain the existence of the flexion, and even, in some cases where a contraction of this newly-formed tissue takes place, to cause the flexion to become still more marked.

Dr. F. W. Lowndes presents a paper, showing great research and care in its preparation, on the "Statistics of Stillbirths." In it are brought together a large number of statistics on the subject from those countries in which a systematic registration obtains, and to these are added the figures reported by various writers on obstetrics and those obtained from the various lying-in hospitals in Europe. One fact is clearly proved by the paper, namely, that, with few exceptions, the percentage of stillbirths is the lowest where the number of forceps cases is the highest; a statement which Dr. Playfair, at the close of the reading of the paper, still further emphasized by alluding to the remarkable results related by Dr. Hamilton (Falkirk), who was accustomed to use the forceps in about the ratio of one to every seven or eight labors, and who has obtained the unprecedented result of 731 consective labors without a single stillbirth.

Dr. Robert Barnes, in a most excellent article on the "Essential Cause of Dysmenorrhœa," claims that, with very rare exceptions, the one essential condition of dysmenorrhœa is retention of the menstrual secretion. He divides all cases into two classes: 1st, those in which the symptoms are caused by an incomplete closure of some portion of the genital canal. This closure may occur anywhere between the fimbriated extremity of the Fallopian tubes and the vulva. 2d, where there is congestion of the uterus combined with extreme nervous susceptibility. In both these cases there is retention; in the first class, the blood being retained in the cavity of the uterus after secretion, while in the second it is retained in the uterine tissues. Several interesting cases are given to prove the truth of this theory.

Many other papers are given, relating to various subjects in which the members of the Society are especially interested. A brief account of the discussions which followed the reading of the papers is also given, thus presenting in one volume the various opinions held by eminent practitioners at the present day. R.

BOOKS AND PAMPHLETS RECEIVED.

Defence of Insanity in Criminal Cases. Argument of Henry L. Clinton, delivered April 15, 1873, at Albany, before the Judiciary Committee of the Senate. New York. 1873. Pp. 41.

The Passions in their Relations to Health and Diseases. Translated from the French of Dr. X. Bourgeois, by Howard F. Damon, A.M. M.D. Boston: James Campbell. 1873. Pp. 201. (From the Publisher.)

Archives of Ophthalmology and Otology. Edited by Prof. H. Knapp, M.D., of New York, and Prof. S. Moos, M.D., of Heidelburg. New York: Wm. Wood & Co. 1873. Pp. 260.

Annual Report of the New England Hospital for Women and Children, for the Year ending Sept. 30, 1872. Boston. 1873. Pp. 33.

Change in the Color of the Hair and Skin.—Dr. H. V. Ferrell (*The Clinic,* April 7, 1873) relates a case of rapid change in the color of the hair and skin of a boy aged 11 years. Several months ago, the boy was considerably frightened by being run away with, soon after which the change of color began to be noticed. At present, at least, three-fourths of the hairs of his head are perfectly white, while the scalp, forehead, cheeks, temples and sides and back of the neck are as white as snow. The white hairs present a uniform appearance throughout their entire length, whereas those that retain their natural color (auburn) show no change in any part of their course.

Boston Medical and Surgical Journal.

Boston: Thursday, May 1, 1873.

RE-APPEARANCE OF THE CHARLESTON MEDICAL JOURNAL.

We congratulate, heartily, our medical brethren of the South upon the re-establishment of this periodical, which formerly took so high a rank among our scientific journals.

The medical profession of South Carolina numbers many men of superior ability and high culture, and it must conduce greatly to the advancement of medical science, if this, the representative journal of the State, receives from them a cordial support. If its pages can be kept up to the standard of the opening number, which is in every respect a creditable production, we are confident that its own intrinsic merit cannot fail to insure from other States a liberal patronage.

Morocco Drugs.—The *British Med. Journal,* Feb. 8, 1873, reports that, at a recent meeting of the Pharmaceutical Society of Great Britain, Dr. Arthur Leared gave some interesting information respecting drugs collected in Morocco during a recent visit to that country. Although the Science of Medicine owes much to the Arab race, which is well represented in Morocco, Dr. Leared found the difficulties besetting an inquirer to be very great, in consequence of the ignorance and fanaticism of those who now practise the strange jumble of astrology and pharmacy which there passes for the healing art. The vegetable products of Morocco, Dr. Leared states, are those of a subtropical country, in which there is great variety as regards the nature of the soil, elevation above the sea-level, and irrigation, great diversity of climate and soil being sometimes experienced within narrow limits. One circumstance that struck him forcibly was the peculiar sporadic distribution of plants, since it almost seemed as if they, like the people of the country, were possessed of exclusive tendencies which prevented one kind from mixing with another. As might be expected, many of the drugs proved to be old friends with new names, among which may be mentioned caraway, anise and fennel seed, ammoniacum and euphorbium gums, rue, cassia, Indian hemp, castor and croton oils, orris root, ambergris, &c. A certain amount of interest attaches to the identification of our own remedies among the Moors, and Dr. Leared is not without hope that some addition to our materia medica may result from the present inquiry. Out of about sixty articles mentioned, he reckons that one-half are well known and commonly used by ourselves, or else derived from botanical sources so closely allied as to be practically the same. About one-fourth are known to but not used by us; and the remainder are derived from plants not at all in use here, or not yet identified. One point worthy of notice is that, while a great number of natural orders are represented, there is a great preponderance of the labiate order.

Hypodermic Injection of Ergotin in Internal Hæmorrhages.—The *Medical Times and Gazette*, Nov. 16, 1872, contains an account of the observations of Dr. Drasche, of Vienna, on this subject. Mention is first made of the influence of such injections, as observed in two persons in robust health. Each injection was followed by a diminution in the number of the pulse by from four to six beats, and the sphygmographic markings exhibited a simultaneous contraction of the calibre of the vessels. The temperature was slightly increased, and the respiration continued normal. No influence on the secretion of urine was perceptible, and the health was undisturbed.

Most of the cases of disease in which Dr. Drasche has tried this means have been examples of hæmoptysis occurring in the subjects of tubercle. He furnishes abstracts of nine cases. The ergotin was administered in doses of from one grain to one grain and a half; the whole quantity employed in each case varying from one grain to seven grains and a half, and the treatment by it occupying from one to six days. The injection, in all cases, induced some local irritation, which, however, soon passed away. In most of these cases the efficacy of the ergotin was very prompt, when other hæmostatics had previously been tried unsuccessfully. In only one of them did it fail.

In two cases of epistaxis the effect was very speedy, and the dose required very small. In a case of hæmatemesis, the bleeding was arrested promptly, after the internal administration of ergotin had been employed without benefit. In one case of intestinal hæmorrhage, occurring in typhus, the bleeding was completely arrested; in another case it persisted.

Dr. Drasche is convinced, from his experience, that ergotin is as efficacious as it is an easily employed remedy. Even if its effects are, in many cases, temporary, yet is the gain very considerable; and where it has been wholly inefficacious, the extent and nature of the lesion offer the explanation.

The best vehicle for the ergotin is glycerine, and the proportion of five grains to the drachm is most suitable. One fifth part of this may be injected once or twice a day. The region of the pectoral muscles is the best locality for the injection.

The Use of Post Partum Binders.—At a recent meeting of the Obstetrical Society of Edinburgh, a somewhat remarkable paper was read by Dr. Cairns, opposing the use of binders after parturition, and, what is the strangest of all, his extraordinary views appear to have met with very general approbation from the members present.

The disadvantages in the use of binders enumerated by Dr. Cairns are as follows:—

1st. That their application entails unnecessary trouble upon the accoucheur. Dr. Cairns confesses that when he first entered upon practice, it cost him more trouble to apply the binders in many cases than to deliver either the child or placenta.

2d. That their application unnecessarily exposes the patient, which, if several persons are present, may thereby shock her moral sensibilities; it may, moreover, expose her to currents of cold air, which, on her part, may lead to the most disastrous results.

3d. Post partum binders impede the circulation, slipping far above the region of the uterus, thus interfering with the venous circulation, and thus tending to aggravate two diseases very common in pregnant women, viz., varicose veins and hæmorrhoids.

4th. They are rarely of proper form. They should properly extend from the ensiform cartilage to a considerable way beyond the nates.

5th. In cases of post partum hæmorrhage, the patient may die before the binder can be removed in order to apply the proper remedies for its arrestment.

Dr. Cairns, in conclusion, compares parturition in civilized and uncivilized conditions, and those two with the parturition of the lower animals. The latter, he affirms, owing to their pendent bellies, evidently require binders much more than women.

THE NEW HÆMATOZOON.—The *Med. Times and Gazette*, March 8, 1873, calls attention to the hæmatozoon discovered by Dr. Lewis, of the Indian Medical Service. The parasite is described as a filaria, and in certain respects is not dissimilar to the trichina, though smaller. It was found in the blood of patients the subject of chyluria, and is supposed to be the cause of this malady.

The importance of the discovery is unquestionable, but the exact history of this parasite has not yet been made out. It is enclosed in a kind of sheath, and this is supposed, by Dr. Cobbold, to indicate that the animal has already entered upon one of those phases of its existence, through one or more of which it is necessary that it should pass before it becomes sexually mature. This gentleman holds that the various species of filaria are merely provisional states of hematoid worms, and that they assume the forms of these mature worms in some other animal, probably carnivorous, or, it may be, in man himself.

The fact that worms are contained in the urine in chyluria is not new, it having been discovered at Bahia some years ago, for this malady of chylous urine is common in Brazil; but that they are to be found in the blood in all cases of the disease is a new observation. The chylous appearance of urine is, no doubt, due to the presence of small particles of oil in this fluid, but how the presence of certain parasites in the blood can give rise to particles of fat in the urine is by no means self-evident. It has been recognized for some time that the endemic hæmaturia of the Cape and Natal is due to a parasite in the kidney called bilharzia, and we could understand how such beings might give rise to bleeding from the vessels of the kidney; but the causation of chyluria by this filaria is difficult to understand, though the connection is unmistakable.

ETHER SPRAY AS A MEANS OF DIAGNOSIS.—Ether in the form of spray has recently been employed to determine the degree of sensibility in a case of obscure paralysis, and with the following result:—

The affected parts when subjected to the jet of atomized ether were found to be frozen at the end of two or three seconds, whereas the other portions of the body, as well as the corresponding parts of another healthy individual, could not be frozen in this manner in less than eight or nine seconds.—*Lyon Medical.*

Medical Miscellany.

THE Board of Trial of the Massachusetts Medical Society met at 11 A.M., April 29th, to try certain homœopathic members. We go to press while the affair is in progress. So far it has been characterized by the efforts of the accused to introduce reporters and lawyers, and, these failing, to raise legal quibbles. In our next issue, we hope to give a report of the proceedings.

M. TARLET has made a bequest of 10,000 francs to the Paris Academy of Medicine, for the purpose of founding a prize on mental and nervous diseases.

ANOTHER human skeleton, though less perfect than the former one, has been found in a cave at Mentone. Bracelets of shells were found on the arms, and near the skeleton were bone implements and drawings of animals.

TREATMENT OF DIABETES BY ARSENIC.—M. Fovelle recommends the internal use of arsenic as a cure for diabetes. He does not use it in the extreme condition of the disease, but in the earlier stage he believes it of undoubted use. He commences with the administration of Forster's solution, night and morning, and continues its administration for three or four months.—*The Medical Press and Circular*, April 9th, 1873.

THE Brompton Hospital for Consumption, in London, consumes two thousands gallons of cod-liver oil annually. Lead, turpentine and gallic acid are the sheet-anchors for hæmoptysis in that institution.—*Canada Medical and Surgical Journal.*

RICHARD PARTRIDGE, F.R.S., a well-known surgeon and anatomist of London, Professor of Anatomy for twenty years to the Royal Academy of Arts, and for twenty-six years to King's College Hospital, died recently, aged 68. He was one of the surgeons summoned to attend Garibaldi after the battle of Aspromonte, but failed to find the ball which Nélaton afterwards detected with his porcelain-tipped probe.—*Medical Times.*

HOW TO DISCOVER ALUM IN BREAD.—One drop of the alcoholic extract of logwood let fall upon pure bread or pure flour gives a brownish-yellow. If the flour contain alum in the proportion of one or two per cent., the color is gray or grayish-violet; with one-half per cent., the spot is yellowish-red, with a border of bluish-gray, and little blue points may be discovered in the disc with a lens; with one-fourth per cent., the bluish border is no longer visible, but the points may be still detected. This is the limit of the reaction.—*Science pour Tous—Mouvement Médicale*, March 29, 1873.

AT a stated reunion of the Medical Library and Journal Association of New York, held April 18, 1873, Dr. John C. Peters, President, in the chair, the following preamble and resolutions were presented and adopted:—

Whereas, This Association, having learned of the death of Josiah C. Nott, M.D., a successful and honored physician, both in the northern and southern sections of our country; therefore,

Resolved, That in the death of Dr. Nott we recognize the loss of one of our most devoted members; a gentlemen eminent for his high integrity and his unblemished character, distinguished alike as an ethnologist, gynæcologist, and surgeon, and by his untiring zeal for the advancement of medical science.

Resolved, That, as an expression of our sympathy with his afflicted family, a copy of these resolutions be transmitted to them and published in the medical journals; also entered on the minutes of this Association.

WILLIAM N. BLAKEMAN, M.D.,
BENJAMIN I. RAPHAEL, M.D., } *Committee.*
BRADFORD S. THOMPSON, M.D.

THE MEDICAL SCHOOL OF MONTPELLIER.—The French Government has closed this school entirely, owing to disturbance among the students. It appears that some student addressed a letter to the Mayor of Carcasonne, protesting against a judicial sentence pronounced against him. During the subsequent deliberation of the Academic Council, the students assembled and interrupted the lectures which were being given, and repeated the disturbance next day. Hence the closure of the Medical and Pharmaceutical Schools.—*Medical and Surgical Reporter.*

MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA.—This institution closed a very successful session early in March. The Faculty have every reason to be highly gratified with the results of their efforts during the past year. After a severe struggle with the numerous obstacles developed by the unfortunate condition of our Southern country, the school has been re-established upon a secure basis. The scheme of a gratuitous course of instruction, forced upon the institution by the exigencies of the times, and considered only a temporary necessity, has worked well, and will be continued the coming session. The general intelligence of the late class was fully up to the usual average, and the standing of the graduates was more than encouraging. The cordial support and hearty approval given to the faculty by members of the profession in this and adjoining States we know is fully appreciated, and must exercise a potent influence upon the welfare of this time-honored and once popular school.—*Charleston Medical Journal.*

HYDROPHOBIA.—From an official report, it appears that in England and Wales, in 1869, there were thirty-two deaths from hydrophobia, all the cases occurring north of the Trent. According to this report, hydrophobia is periodic in its character. Statistics for the last thirty-two years in reference to this disease are cited in support of this theory.—*Med. and Surg. Reporter.*

ANSWERS TO CORRESPONDENTS.

[M.D.]—TULLY'S POWDER.—

℞. Morphiæ sulphatis, gr. i.;
Glycyrrhizæ pulv.,
Cretæ præparatæ,
Camphoræ, aa grs. xx. M.

We have reason to believe that it occasionally contains a larger proportion of morphia.
EDS.

MORTALITY IN MASSACHUSETTS.—*Deaths in fourteen Cities and Towns for the week ending April* 19, 1873.

Boston, 153—Charlestown, 11—Worcester, 13—Lowell, 20—Milford, 2—Chelsea, 4—Cambridge, 19—Salem, 7—Lawrence, 11—Lynn, 11—Fitchburg, 3—Newburyport, 2—Somerville, 9—Fall River, 33. Total, 298.

Prevalent Diseases.—Consumption, 56—pneumonia, 36—cerebro-spinal disease, 32—scarlet fever, 22.

Three deaths from smallpox are reported: two in Boston and one in Cambridge. Deaths from cerebro-spinal disease are reported as follows:—Sixteen in Boston, four in Lowell, three in Cambridge, three in Lynn, two in Worcester, two in Fall River, one in Charlestown, one in Salem.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, April 26th, 137. Males, 65; females, 72. Accident, 3—abscess, 1—apoplexy, 1—anæmia, 1—bronchitis, 1—congestion of the brain, 1—disease of the brain, 3—cancer, 2—cerebro-spinal meningitis, 14—consumption, 24—convulsions, 3—croup, 1—debility, 2—dropsy, 1—dropsy of the brain, 2—diphtheria, 1—scarlet fever, 5—disease of the heart, 6—hæmorrhage, 1—insanity, 1—inflammation of the knee-joint, 1—intemperance, 1—disease of the kidneys, 2—disease of the liver, 3—inflammation of the lungs, 16—marasmus, 8—old age, 5—paralysis, 2—premature birth, 2—peritonitis, 2—puerperal disease, 2—quinsy, 1—rheumatism, 2—smallpox, 3—suicide, 1—teething, 6—unknown, 6.

Under 5 years of age, 51—between 5 and 20 years, 13—between 20 and 40 years, 33—between 40 and 60 years, 20—over 60 years, 20. Born in the United States, 90—Ireland, 31—other places, 16.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

TYPHOID FEVER AND PLEURISY.

By W. C. B. Fifield, M.D. Harv.

At a recent meeting of the Boston Society for Medical Improvement, the subject of pleurisy as a complication of typhoid fever, or as occurring after typhoid, to delay convalescence or even to entirely prevent recovery, was to a limited degree discussed; and, as a case reported by myself of extensive pleuritic effusion occurring after typhoid fever, and cured by the operation of thoracentesis, was received with some expressions of incredulity and some intimations of imperfect observation, I shall now re-open the subject, as I deem it of great importance. I believe that when it is more publicly recognized and taught that pleurisy is not a very uncommon complication or sequel of typhoid fever, the neglect of auscultation and percussion, both during and after typhoid fever, on the ground of pleurisy being almost an impossibility, will be regarded as a very great omission of duty, to say the least. I doubt not that graves have been and will be filled from such neglect, caused by the belief in the exceeding rarity of pleurisy in typhoid fever. My attention to this point was first attracted by a case in the practice of Dr. C. E. Stedman, whose notes and beautiful diagram I copy.

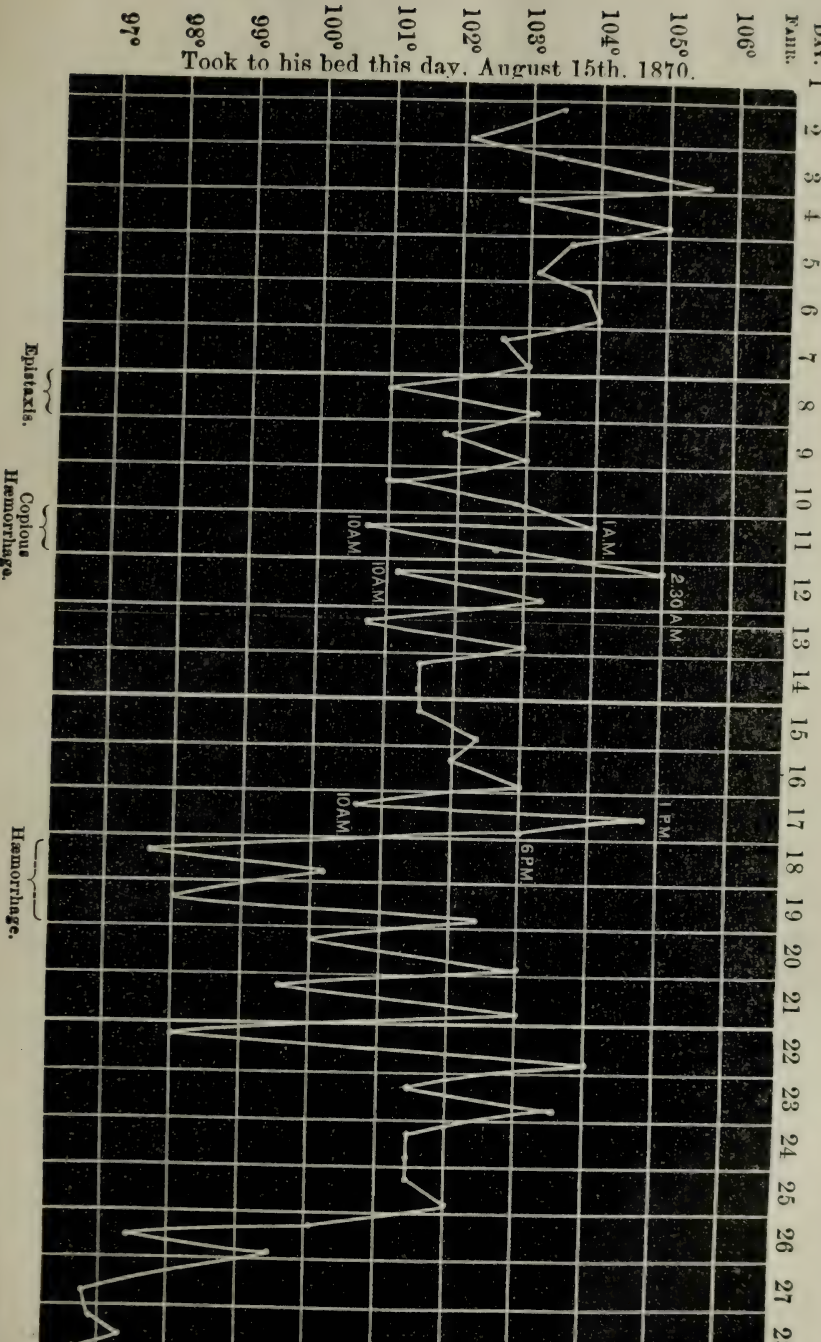
"Fatal case of typhoid fever in a robust patient, æt. 34 years. Prodromata marked for weeks. During first week, nausea and vomiting, rendering diagnosis cloudy and treatment difficult. No cerebral or abdominal symptoms during first week. Headache only one day. No rose-spots or sudamina throughout. Tympany marked for a few days only, in the beginning of the fourth week. Occasional bleeding from the bowels relieved by brandy and kino. Pulse 100 to 115 during the first week; during second week, 130 to 140. Tongue very black, with much sordes; cleaned during the third week. Dejections every second or third day by enemata. Urine plentiful; catheter required only once, on the 26th day. Delirium busy and constant. Effusion probably took place in the left pleural cavity, on the twenty-second day, evinced by pain in the side, cough and elevation of temperature. Patient died Sept. 12th, 1870.

"*Autopsy.*—Head not opened. Three ounces of serum in pericardium. Left pleura contains three pints of serum. Right lung hypostatically congested, with solid spots in centre. Stomach healthy. Spleen large but sound. Liver enlarged. Kidneys of the horseshoe shape, with ureters crossing in front of the connecting mass; healthy. Peyer's patches in all shades of inflammation, from thickening to slough, increasing from above downward, till, at the ileocæcal valve, the ulceration encircled the opening. Colon healthy. The ulcer whence bleeding came seemed indicated by a thin clot encircling the edges."

The accompanying thermometric chart is interesting, as showing the sudden elevation of temperature at the onset of pleurisy. It will be readily seen that this was acute, and that the amount of effusion could not have had any great effect in the case, which, from the extensive ulceration and repeated hæmorrhages, must, in all probability, have proved fatal in any event.

Case II.—November 24th, 1871, a man aged, perhaps, 28 years, came under my care as a case of typhoid fever, the most severe one I have ever seen recover. It would be tedious to give my full notes, with record of temperature; suffice it to say, that he had meteorism, diarrhœa, hæmorrhage from the bowels, &c. &c. On the 31st of January, 1872, he was removed to Boston, being then so feeble and emaciated that four hours were consumed in travelling four miles. Just before his removal, I had discovered dulness on percussion throughout lower two-thirds of left back, with faint bronchial respiration. He had, also, a teasing cough, with considerable expectoration. The diagnosis was pleuritic effusion, and treatment was instituted with that view. On the 11th of February, a consultation was held with Dr. Bowditch, who was inclined to consider it a case of phthisis, and advised his removal to a warmer climate. March 1st, he was removed to New York, having already gained in strength and lost nearly all his cough. In June, he returned to Boston quite well, weighing, perhaps, 180 pounds. I then carefully examined him, and found respiration perfect throughout both lungs.

Case. III. is the one lately reported to the Society. Two boys were seen in a house on Ellsworth Street, in Boston; one about 11 years of age, the other 7. From this house, another brother had been, some time previously, removed to the City Hospital, where he went through an ordinary run of typhoid fever. The two lads seemed to my observation, as well as that of another physician, to have undeniable typhoid. On the 10th of February, they were found in the following condition. The eldest boy was sitting by the fire, miserably emaciated, but with good appetite, and on the high road to recovery. I should have mentioned that both boys had their chests carefully auscultated and percussed at a previous visit, but nothing remarkable noticed. The youngest was yet in bed, still more emaciated than his brother; had cough, a pulse of 120, and something of the peculiar, occasional delirium seen in patients who have had typhoid fever



Took to his bed this day, August 15th, 1870.

Died, 6, P.M., Sept. 12th, 1870.

severely. Percussion perfectly flat throughout left back. Marked bronchial respiration to the same extent, with a fine râle at angle of the left scapula. Heart dislocated to right of sternum. Nothing of the Skodiac resonance noted at apex of left lung. I may here state that I do not remember to have ever heard this resonance, which has been so much spoken of in connection with pleuritic effusions, more than once in my life.

12th.—I punctured, first for diagnosis, with Dieulafoy's little aspirateur, then with the Potain, removing about a quart of serum. He has since entirely recovered.

Grisolle, in his Traité de Pathologie Interne, edition of 1859, p. 43, says:—"Capillary bronchitis, *pleurisy*, pneumonia, and passive congestion of the lungs are very common complications of typhoid fever. Pneumonia and pleurisy are rare complications at the commencement. They ordinarily occur only in the second or third week, or even much later."

Alexander Tweedie, in his Lectures on the Distinctive Characters, Pathology and Treatment of Continued Fevers, published in 1862, says, p. 89, op. cit.:—"In enteric fevers, there is a marked tendency to inflammation of serous membranes, and hence pleuritic inflammation is a frequent complication or secondary affection. It may not always be recognized by the general symptoms alone, but, by careful auscultation, its presence can scarcely be overlooked. It would appear to be less frequently observed in the typhoid affection of Paris, for Louis mentions that out of fifty cases he only met with it once. This infrequency of pleurisy as a complication of typhoid fever does not accord with the experience of British physicians, and from the susceptibility in this fever, to serous inflammations, more especially to pleurisy, it is well to be on the lookout for it even in mild cases. It is indicated by sudden chills and shivering, pain or stitch in the side on deep inspiration, disinclination to lie on the affected side, hurried breathing, pleural friction sound, with circumscribed dulness. These characteristic signs are not always present; indeed, in the greatest number of cases the disease is less open. There may be no rigor, little if any stitch, little or no hurry in breathing, perhaps only flushing and hot skin, to indicate that something is wrong. Examination of the chest seldom fails to reveal the secret, by creaking heard over the seat of the pleuritic inflammation, or, if the mischief has crept on still more insidiously, the percussion note is dull and the respiratory murmur absent [I wish he had said something about bronchial respiration, and about the fine râles heard, especially in pleuritic children], indicating the existence of fluid more or less copious in the pleural cavity. It is remarkable how rapidly the fluid accumulates in some cases, and with how little warning of the antecedent inflammation; hence the necessity of watching, in cases of enteric fever, however mild, for the first approach of pulmonary symptoms, which may surprise at any stage of the disease, or even during convalescence."

I am fully aware of whatever may be rough or imperfect in my observation; but if, by awakening the attention of medical men to the not very infrequent complication of typhoid fever with pleurisy, it induces a more frequent examination of the chest during the progress of enteric fever, and thereby perchance saves a life otherwise lost, I shall not esteem my labor worthless.

Harrison Square, March 3, 1873.

A CASE OF PARALYSIS OCCURRING DURING VARIOLOID.

By F. W. Goss, M.D. Harv.

Mrs. F., æt. 50, of nervous temperament, who had been under the care of a physician for what was called "nervous debility," on the morning of Sept. 19th, 1872, after known exposure to smallpox, showed upon her body and extremities the eruption of varioloid. Judging from the constitutional symptoms and the amount of the eruption, the attack was not severe, and in a day or two the patient was sitting up. During the 23d, she complained of a "gnawing pain" in the left arm, which, on the next day, was present in the right arm and in the lower extremities. Towards the evening of this day, she noticed that she could scarcely move her legs or feet, and the power of motion in the upper extremities was also impaired. On the 25th, she was unable to turn in bed; there was slight motion in the ankles, but she was unable to flex the legs or thighs. The forearms could be flexed upon the arms, and there was partial ability to move the latter at the shoulders, though she could not raise her arms to her head. There was no paralysis about the face; the tongue was protruded normally, the pupils were natural, the intellect and speech unaffected. No tenderness could be discovered on pressure over the spine, and nowhere over the body did sensation seem abnormal.

The pain, which she referred to the bones, gradually disappeared as the paralysis increased. On the morning of the 27th, the patient seemed to be totally paralyzed in the upper and lower extremities. The intellect remained clear, the face natural. Her voice seemed somewhat husky, and it was evident that she was rapidly failing. The next morning, she died.

The case suggests the inquiry as to the connection of the variolous disease with the paralysis; whether the former gave rise to the latter, or whether the paralysis would have occurred had the patient not been attacked with varioloid.

Writers speak of paraplegia, usually incomplete, as occurring sometimes in the initiatory stages of severe cases of smallpox, and that a loss of power over the extremities may also occur in the disease, when the system has been much reduced by its severity; but I have not been able to find any mention made of such loss of muscular power in so mild an attack as that experienced by this patient.

One gentleman, whose opportunities for the observation of smallpox have been exceptionally great, informs me that he has seen, in two or three cases of great severity, delirium and paralysis come on previous to death, but that he has met with no case corresponding to the one here reported.

Dudley Street, Boston Highlands.

Lecture.

THE MECHANISM OF PRODUCTION OF SYMPTOMS OF DISEASES OF THE BRAIN, AND THE CONCLUSIONS TO BE DRAWN FROM THE KNOWLEDGE OF THAT MECHANISM FOR THE TREATMENT OF THOSE DISEASES.

A Lecture delivered in Boston, April 5th, 1873, by C. E. Brown-Séquard, M.D.

Reported by Drs. S. G. Webber and J. J. Putnam.

In referring to the previous lecture, Dr. Brown-Séquard said that it was not possible to assign special functions to the different parts of the brain in view of the facts which we now possess. If, as we find, a portion of the brain is able to perform the functions of the whole, we must conclude, to be logical, that a given part of the brain has no function, or can take upon itself every function.

He spoke of the inhibitory action of nerves upon nerve contres, saying that lesions in the bowels or brain may produce symptoms due to the transmission of an irritation from the part affected to other parts.

In the previous lecture, several hypotheses were advanced. These were in accordance with true scientific principles, though they may soon be overthrown. One hypothesis was that each side of the brain is a whole brain; one hemisphere is sufficient for all the functions of the brain; one side may be destroyed and all the functions remain. Again, very few fibres are sufficient to communicate between the groups of cells at the base of the brain and the cord; of the multitude of fibres shown by the microscope all are not necessary; e.g., perhaps of fifty million, fifty may serve for transmitting the communications. This is seen after the destruction of a large part of the medulla oblongata, the functions remaining in the parts below.

An interesting study is found in the variety of effects which may be produced by an irritation. Injury to the trunk of a nerve may give rise to symptoms of brain disease, or inflammation at a distant part, or hæmorrhage, or, perhaps, not even excepting so-called malignant products, almost any change in the natural cells and constituents of parts. The same is seen when the brain is affected or the bowels.

The extent of power of an irritation in the brain is greater than when it is in other organs; thus, if parts of the medulla oblongata are pricked, we find a complete arrest of activity in every organ having dynamic power, heart, lungs, &c. A very slight irritation has great power.

In certain animals, we may find only arrest of respiration from a prick of the restiform body; or there may be only a loss of power of the will over muscles, the respiratory action continuing; or the heart alone may be arrested.

So, crushing the ganglia of the sympathetic in the abdomen will cause the heart to cease acting. This he had shown, in 1856, on rabbits, but it was not particularly brought to the notice of the profession until Goltz, in Germany, proved the same thing in frogs, that a blow on the belly would arrest the heart. But the same irritation may destroy the power of the will, without affecting the heart. Here we have the same phenomena following an irritation of the brain in the prick, or of a peripheral nerve, i. e. respiration ceases, the heart is arrested, the will is abolished.

Again, passing a current of carbonic acid forcibly into the larynx may stop convulsions of epilepsy, or those excited by strychnia, may arrest the heart and abolish the power of the will.

Very cold water injected into the ear in a well person may give rise to a state of perturbation, so that the person will turn round in a small circle, or will walk, as it were, on the sides of a square when attempting to walk on its diagonal. The same is seen in certain lesions of the brain.

Lesions may cause symptoms to appear in a very short time. If certain parts of the brain are pricked, very quickly there may be found in the lungs, in one part anæmia, in other parts œdema of a peculiar nature, the bloodvessels being crowded with white corpuscles, as was shown by Ranvier ; also there may be emphysema, not caused as the two theories in vogue would lead us to suppose, during inspiration or during expiration, but resulting, when the lungs are at rest, without any movement, so that the two old theories are not the only true causes. Also, there may be ecchymosis and hæmorrhage in the lungs. Thus a great variety of lesions are found to arise immediately from lesion of the brain.

Time was wanting to pass in review the various viscera, the skull and meninges, to show a similar mechanism in their action when irritated.

The corpus striatum was considered the organ of the will by many, the optic thalamus the organ for sensation ; these views are not right. These parts may be destroyed without symptoms following, and there may be many different symptoms from the same disease. A remarkable case was mentioned of a patient with an abscess in each corpus striatum, that in one being larger than the other. The only symptom present was anæsthesia on the same side with the larger abscess. Ollivier records a case of anæsthesia on the same side with the injured optic thalamus.

He said he now possessed a very large number, one hundred or more, of cases of brain disease with the symptoms appearing on the same side. Generally, the symptoms are on the opposite side, but in disease of certain parts they are on the same side. There is one corner where this is especially true, the pons, restiform body and over the petrous bone.

Again, hemiplegia may be due to pneumonia, as has been shown by Dr. Lépine, the paralysis occurring on the same side with the lung disease, or on the opposite side ; so that irritation of nerve fibres in the lung may have an effect similar to lesion of the brain, and like that, on the same side or on the opposite side.

Lesion in the brain or in the periphery may cause epilepsy ; so, also, irritation in certain parts of the brain or periphery may cause arrest of the epilepsy.

These cases of arrest of certain functions, as of respiration, of the heart, or of the will, are due to the arrest of the activity of certain cells, place them where you will, which preside over such actions. Many kinds of morbid respiratory acts, hiccough, cough, gaping, sneezing, spasm of the glottis may be arrested by pressing on parts of the face or neck. By passing carbonic acid into the nostrils, headache may be relieved; this may also be used in asthma. Action of certain ganglia will stop the action of the bowels. The vaso-motor centre may be paralyzed by galvanizing the depressor nerve, so causing a general fulness of bloodvessels. The reflex faculty of the cord and medulla may cease when the skin of a frog's leg is pinched.

He has seen fifteen cases where drawing on the great toe caused the cessation of what is called spinal epilepsy; why this is so, he does not know. General epilepsy may be stopped when the loss of consciousness does not occur at the beginning of the fit, by drawing the parts which are convulsed. Contraction of the neck of the womb has recently been said by a Southern doctor, Dr. Washington, to cease on application of dry cups to the skin of the sacrum. Such facts show that the excitation goes to certain cells and causes cessation of this activity, and then the phenomena cease.

So in the brain, we must admit something similar; emotion may have such an effect. A prick of the arm, before bleeding, has caused syncope. So loss of consciousness in epilepsy depends on the loss of activity of cells. Contraction of bloodvessels of the brain cannot act quickly enough, and that can be only one way in which such loss is produced, but it is not the usual way. The loss of consciousness may occur with vessels full of blood, as is seen in Guinea pigs artificially epileptic in which the cervical sympathetic has been divided. They still have the epileptic loss of consciousness when the epileptogenous zone is irritated.

In syncope, the loss of consciousness is not dependent on cessation of the heart's action. The heart may stop and consciousness persist, or consciousness be lost and the heart act. The power of the will may continue even when the brain is full of bad blood.

In regard to treatment in view of the facts mentioned. A paralysis due to organic lesion may disappear at once under emotion, or an act of will, the paralysis being then cured, though the cause remains. It is desired to find something like this in applying treatment. The only thing is an irritation acting on the skin. Doing this, he has had opportunity of recalling a patient to life. After erysipelas of face, there was intense headache, hemiplegia and coma, and probably an abscess of the brain. He has been nearly cured and remained well long. He was in coma two or three times, and roused out of it by actual cautery applied to the head and between the shoulders. The iron must be heated to a white heat and passed lightly over the skin. There is no pain. He has found only one patient who refused a second application.

The application should be made on the paralyzed parts, limb or face, not over the spinal column, or if centrally, over the vaso-motor centre in the neck. In one case, he roused a patient out of coma by applying it to the head; and this was repeated many times, forty or fifty at least, during two years, and the patient died finally in coma, there being no one present to cauterize him.

Progress in Medicine.

REPORT ON OPHTHALMOLOGY.

By O. F. Wadsworth, M.D. Harv.

[Concluded from p. 445.]

Conjunctiva.

Treatment of Strumous Ophthalmia.—Power *(Practitioner,* October, 1872) believes that general treatment is insufficient in this disease, and, of local remedies, prefers calomel, atropine, and Pagenstecher's yellow ointment. These he has not, however, always found effective, and he strongly recommends the internal use of extract of belladonna, in doses of from one-sixth to one-fourth of a grain three times a day, as relieving intolerance of light and spasm of the orbicularis. He attributes its good effects to stimulant action on the sympathetic nerves, and so on the small vessels. It is of advantage, also, as obviating the necessity of purgatives through its action on the bowels. The seton over the temple, employed by some of the London surgeons, he regards only as a *pis aller;* and the plan of dipping the child's face for a few instants into cold water has not appeared to him persistent in its effects.

Streatfield *(Lancet,* Aug. 3, 1872) speaks strongly in favor of a modification of the latter plan which he has employed, viz., a cold jet of fine spray thrown for a few moments on the child's face, and he believes a part of the benefit derived from this is due to the force with which the spray strikes the lids; at the same time it is less alarming to the child than the ducking.

Treatment of Granulations by Electricity.—Schivardi *(Central-Zeitung,* July 31, 1872) publishes an account of three cases of granulations, which had existed two, three and eight years, successfully treated by the application of a current from two Bunsen's elements, the positive pole applied to the inverted upper lid by a probe-pointed sound, the negative to the back of the neck by a wet sponge. The first case is said to have been cured after five sittings, the second much improved after two, the third cured after nine. The first sitting should last only ten minutes.

Trueheart *(Medical Record,* Dec. 16, 1872) calls attention to treatment of this disease by the galvanic current, and invites experiment, but does not claim to have attained any remarkable success. For the upper lid, one electrode is placed over the middle of the eyebrow; for the lower, over the maxillo-malar articulation; the other, tipped with soft sponge or hair from a camel's-hair pencil, is brushed slightly over the inverted lid. Strength of current and length of application according to the pain excited. Three to five daily sittings generally excite enough inflammatory reaction to set in motion the absorption of diseased materials. Then the treatment must be discontinued for a few days, to be resumed when the inflammation has subsided.

Cornea.

Pathology of Corneal Inflammation.—Talma *(Graefe's Archiv,* xviii. 2) gives the result of his investigations on this much-disputed subject, and concludes, with Cohnheim, that all pus-cells in the inflamed cornea are white blood-corpuscles which have migrated from the vessels. The methods which he used differ from those of other observers chiefly in that a portion of the corneæ to be examined were placed in a 7½ to 10 per cent. solution of sugar. In such a solution the corneal corpuscles preserve, in all important particulars, the well-known characteristics they present when the cornea has been placed in aqueous humor; the wandering cells, on the other hand, take on a nearly spherical shape, and refract light strongly. Corneæ in the most various stages of the inflammatory process, so prepared, contained only two sharply distinguished forms; spherical, strongly refracting pus-cells, and flat, branching, pale, corneal corpuscles. There were no intermediate forms, and no signs of division in the cells to be seen. In the earlier and lesser stages of the inflammation, the corneal corpuscles appeared much as in the normal condition; later, granules and small vacuoli were often to be observed in them, their outlines were paler, and, finally, with progressive softening of the tissues, they seemed to break up and disappear. He found, as did Key and Wallis,* that in the immediate neighborhood of the spot where nitrate of silver had been applied, the corneal corpuscles almost immediately afterwards were shrunken, granular, or contained vacuoli, evidently due to the direct action of the caustic. When the centre of the cornea of guinea-pigs was cauterized, examination an hour or two later showed many of the vessels at the edge of the cornea filled, others surrounded by white corpuscles, some of which had already commenced to progress into the cornea.

Cauterization of the Conjunctival Fold in Corneal Affections.—Hosch *(Monatsblatt f. Augenheilk.*, Nov., 1872) recommends the application of pure nitrate of silver to the fold of the conjunctiva, so as to produce a linear eschar, in certain cases of ulcerative affections of the cornea. He states that by this means the conjunctival congestion is rapidly diminished and vascularization of the corneal tissue promoted, and gives reports of cases, treated by this method, to show its efficacy. The treatment is only to be employed, however, where there is much swelling of the conjunctival fold, and cauterization of the tarsal portion of the lid must be carefully avoided.

Treatment of Conical Cornea.—Bader *(Lancet*, Jan. 20, 1872) reports nine cases of conical cornea operated on by removing a small oval piece, the whole thickness of the cornea, from the summit of the cone. A curved needle was first made to transfix the cone, so as to include the portion to be excised, and served to prevent direct contact of the lens with the cornea during the excision. In the first cases, a suture was drawn through and tied after the excision was made; later, this was abandoned. The eye operated on was kept bandaged about six weeks. After complete healing, iridectomy was performed. There does not seem to have been very great inflammatory reaction, except in one case, in which contact of the iris with the cornea and the folded state of the cornea produced by the suture continued for six weeks. The result in all cases was great improvement in the vision.

Bowman *(Monatsbl. f. Augenheilk.*, Sept., 1872) presented, at the International Ophthalmological Congress in London, an instrument somewhat resembling a trephine, by which he removes a circular piece from the summit of the conical cornea $\frac{3}{4}'''$–1''' in diameter. He showed, also, a similar instrument contrived by Wecker.

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* Vide Report on Ophthalmology, this JOURNAL, Nov. 7, 1872.

Corneal Tumors.—Samelsohn (*Monatsbl. f. Augenheilk.*, Oct., 1872) describes a unique case of cyst of the cornea, situated between its lamellæ, so that that portion of the corneal tissue forming the inner wall of the cyst was pressed inward and encroached on the anterior chamber, while the outer wall projected strongly forward. A thin pterygium reached to the edge of the cyst, but did not seem to be connected with it, inasmuch as dissecting off the pterygium left the cyst intact. Removal of a portion of the anterior wall of the cyst was followed by cure.

Schmid (*Graefe's Archiv*, xviii., 2) describes five tumors, epithelial and sarcomatous, starting from the limbus corneæ. The chief point of interest they present is the fresh evidence of the resistance offered by Bowman's membrane to implication of the corneal tissue.

Strawbridge (*Am. Jour. of Med. Sciences*, Jan., 1873) reports a case of dermoid tumor of the cornea, not advancing far on the cornea itself, but extending backward between the inferior and external recti muscles beyond the equator of the globe.

Pigment Deposits in the Cornea.—Hirschler (*Graefe's Archiv*, xviii. 1) describes deposits of black pigment in the substance of the cornea, found in old cases of interstitial keratitis, and believes them due to a change in the hæmatin which is found in the interstitial hæmorrhages occurring during the vascular stage of this disease.

Ritter (*Monatsbl. f. Augenheilk.*, Oct., 1872), under the title of iritis pigmentosa, narrates a case in which, with pigmented posterior synechiæ, some diffuse opacity and two spots of black pigment in the posterior layers of the cornea were present. He considers that the uveal layer of the iris had been here chiefly or alone inflamed; that the corneal opacity was secondary; and that the pigment had come from the iris, been deposited on the posterior wall of the cornea, and thence found its way into the corneal tissue. The cases reported by Hirschler are regarded as of the same nature as his case, and the origin of the black pigment from hæmatin denied.

IRIS AND CHOROID.

Cholesterine in Anterior Chamber.—Robertson (*Edin. Med. Jour.*, August, 1872) showed, at a meeting of the Medico-Chirurgical Society of Edinburgh, an eye which contained a large cyst of cholesterine in the anterior chamber. During life, the presence of floating crystals in the anterior chamber was very evident.

Irido-Choroiditis.—Schmidt (*Graefe's Archiv*, xviii. 1) narrates two cases of monocular, purulent irido-choroiditis, with chemosis of conjunctiva and exophthalmos, in both of which the sclera was perforated and a circumscribed collection of pus found under the conjunctiva near the insertion of the internal rectus. The one was a case of phthisis, the other of extensive purulent inflammation of the side of the neck and also of the knee-joint. In the latter case there was an autopsy, and besides metastatic abscesses, an old thrombus of the left jugular vein and transverse sinus was found. No emboli or purulent thrombi in the choroid. Schmidt believes that the irido-choroiditis occurring in cases of cerebro-spinal meningitis, typhoid, scarlatina, tuberculosis, &c., is more probably due to thrombi, which have formed on account of weakness of the circulation, than to emboli, as has been considered. One-sided exophthalmos, with congestion and œdema of conjunctiva and orbital tissue, has been latterly held up as a most important symptom of thrombosis of cerebral sinus. In his case this symptom was present, but was due to the irido-choroiditis; it is only when irido-choroiditis is wanting that it can be of diagnostic value as to thrombosis of sinus, a fact which he thinks has not been sufficiently regarded, judging from reported cases.

Epithelial Cancer of Choroid (secondary).—Perls (*Virchow's Archiv*, 56, 4) reports in detail the appearances observed in a case of epithelial cancer, supposed primarily of the lung, in which nodules of the growth existed in many thoracic and abdominal organs, and also in the choroid of each eye. At the edges of the nodules in the choroid, it was evident that the capillary vessels were plugged with epithelial cells, and occasionally the plugged capillaries could be directly traced into cylinders of cells of larger size, still surrounded by a defined contour which contained nuclei resembling those of the capillary wall. Farther on, the wall enclosing the cylinders was lost, and the growth became rather an infiltration. Here the epithelial cells formed quite large, onion-like masses. The choroidal tissue formed the stroma between the cells; the internal limiting membrane and the sclera were intact.

Perls considers, from the appearances, that epithelial cells from the tumor in the lung must have been carried along by the blood current and deposited in the chorio-capillaris, where they proliferated. The nuclei of the capillaries may, perhaps, have finally taken part in the new growth; that they did not at first is shown by their perfectly normal appearance in capillaries plugged with cells.

Retina and Optic Nerve.

Retinitis Pigmentosa.—Landolt (*Graefe's Archiv*, xviii., 1) gives the results of the microscopic investigations of two cases of typical retinitis pigmentosa, both of which had been observed during life; one, indeed, having been kept under observation by Professor Horner for several years. In both, the disease had progressed to total, or nearly total, blindness. It is worthy of remark that, in neither case, were the parents related, nor were other members of the family affected. The changes found in the retina agreed with those in cases which have been previously described by others: hypertrophy of the connective tissue elements, especially of the adventitia of the vessels, their calibre at the same time being diminished, accompanying disappearance of the nervous elements, and heaping up of pigment in the retina, mostly in the walls and immediate neighborhood of the vessels. The pigmented epithelium was now changed, now wanting, and Landolt was able to convince himself that the changes in the pigment layer were in direct relation to the position of the retinal vessels. The chronic inflammatory changes occurring in the vessel-walls seem to exercise in some way a sort of attraction on the pigment, which, partly still contained in the cells, partly free, wanders in toward them. In one of Landolt's cases, there was no change in the choroid, while in the other, changes, though present, were slight. This fact is of importance, since in most, at least, of the cases hitherto reported, the choroid was so much implicated as to give ground for the supposition that the retinal affection was only secondary. In accord with the clinical course of the disease, the changes were found most advanced toward the periphery and diminishing gradually toward the nerve. The whole process Landolt considers to be one of chronic inflammation of the retina, and especially of the walls of its vessels, commencing at the periphery and proceeding slowly backward. The disappearance of the nervous elements is secondary and a consequence of the hypertrophy of the connective tissue, and, as the deeper layers of the retina become affected, the epithelium is also involved. The choroidal changes so often found, warty thickening of the basement membrane (Leber) and alteration of its vessels and tissue, may be readily explained by the supposition of extension of the inflammation by contact. The results of examination of certain cases of retinitis pigmentosa (so called) without pigment in the retina, would seem to support the view of a primary affection of the adventitia of the vessels. In these cases, with like clinical course, only the inner layers of the retina were affected; but here, as in typical cases, the thickening of the vessels was a constant and most marked change. Finally, Landolt suggests that the disease may be analogous to a cirrhosis of the liver or kidneys, in which, also, the change commences by increased formation of connective tissue about the vessels. One of his cases died of cirrhosis of liver, with similar affection of kidneys; the other of cirrhosis of kidneys, with similar slight affection of liver and spleen.

Albuminuric Retinitis, with separation of Retinæ during Pregnancy.—Brecht (*Graefe's Archiv*, xviii. 2) reports the following interesting case. A woman, 28 years old, previously healthy, having borne one child and aborted twice, observed, while in the sixth month of pregnancy, loss of vision in the right eye. Three days later, she had epileptiform convulsions during several hours. A few days later, sight of the left eye was also affected; then swelling of ankles. Ten days after the convulsions occurred, there was found very extensive and prominent separation of the retina; right on all sides, left on all sides except inward; the discs somewhat swollen and opaque, their outlines indistinct; small white patches and hæmorrhages in the retina near the nerves; small changes in the pigment where separation did not exist. The right eye counted fingers at 1′, the left at 2½′. Urine dark, scanty, containing a large amount of albumen and fibrinous casts, with epithelium in a state of fatty degeneration. During the following twelve days the separation continued the same, but the white patches in the retina increased in number and size, and the changes in the choroid became greater; the urine became greater in quantity, but still contained much albumen. Birth of the child occurred at this time, without dangerous symptoms, and the woman's condition improved. A week afterward, the retina in either eye had resumed its normal position, except far toward the periphery at the lower part; the appearance of the retina and discs had improved, and the vision was much better. In another three weeks, albumen and casts had disappeared, and four months from birth of the child, though the discs were decidedly pale and the arteries small, and there were pigment patches in retina as well as choroid, the white patches in the retina had entirely disappeared, the field of vision was normal, and vision left $\frac{15}{20}$, right $\frac{15}{100}$. Brecht gives also two other cases which he had observed, similar to the above, except that there was no separation of the retina, and which ran a very similar course. In one of these, vision, a year from the commencement of the trouble, was normal in both eyes; in the other, $\frac{15}{20}$ both sides, but with a defect in the field of one eye downward. The changes finally to be seen were much the same in all the cases; only in the better eye of the last case had the disc and vessels resumed their normal appearance, but here there were still some pigment changes at the periphery.

Incision of Nerve Sheath in Neuritis Optica.—Von Wecker (*Monatsbl. f. Augenheilk.*, Sept., 1872), at the International Ophthalmological Congress in London, referred to the distention of the space between the sheaths of the optic nerve with fluid coming from the arachnoid cavity, which has been shown to exist in some cases of neuritis optica. He considered that the indication in such cases was to provide a way of escape for the fluid between the sheaths, and thus to relieve the symptoms of intra-cranial pressure and the strangulation of the nerve at its entrance to the eye. To effect this, he had devised an operation, which, after practice on the cadaver, he had performed in two cases of cerebral amaurosis (probably from cerebral tumor). An incision was made between the rectus externus and inferior, one-third of an inch from the cornea, and the scissors pushed between Tenon's capsule and the globe back to the nerve; then, the wound being held open and the globe turned upward and inward by means of a spatula, the nerve sheath was incised by an instrument constructed specially for this purpose. Wecker states that the operation is easily performed, gives rise to little reaction, and, in his two cases, was followed by improvement of the headache, &c. There was no special improvement of vision.

Powers (*St. Bartholomew's Hospital Reports*) relates a case in which he had performed Wecker's operations, but there seems to have been no particular advantage gained.

GLAUCOMA.

Rydel, in an article in *Graefe's Archiv*, xviii., 1, calls attention to the importance of the influence which interruption of the circulation exerts on the production of blindness in glaucoma, and thinks it is not generally sufficiently appreciated. He relates the case of a patient operated on three weeks after a sudden attack of blindness from acute glaucoma (the other eye had been lost two years before by a similar attack). An iridectomy restored the clearness of the media and normal intra-ocular pressure, and there was no glaucomatous excavation, but the veins, and especially the arteries, remained very small, and only quantitative perception of light was attained. He supposes here a paralysis of the retina from lack of blood, and believes that the same thing occurs also in chronic glaucoma.

The theory that peripheric vision is primarily extinguished in this disease because the nerve fibres which go to the periphery come through the centre of the papilla, and are therefore more exposed to pressure and dragging where excavation is produced, does not appear to him satisfactory, nor to make clear why the outer portions of the periphery lose their functions sooner than the inner. His own explanation of this fact is, that the circulation is more easily checked in the vessels supplying the outer parts of the retina, on account of their greater length and smaller calibre.

TREATMENT OF MYOPIA.

Schiess-Gemuseus *(Beitrag z. Therapie der Myopie,* Basel, 1872) gives the results obtained by atropinizing fifty-three patients in whom the test by glasses showed a myopia. These include twenty-nine cases previously reported by Hosch. Of one hundred and one apparently myopic eyes, eighty-six were, under the action of atropine, no longer myopic, or only so in less degree. Nine apparently myopic eyes were shown to be really hypermetropic. The treatment consisted of daily instillation of atropine, and was continued, on the average, about a month, during which time the patient wore colored glasses. In a few cases, in which there was reddening and indistinctness of the discs, blood was also taken from the temple. Eighty-one eyes thus treated were examined at intervals of from one to nine months after termination of treatment. In fifty-six the myopia remained of less degree, in seventeen it was the same as before treatment, in eight it had increased. The author concludes, from these cases, that spasm of the ciliary muscle is an important cause of acquired myopia, and that the above treatment should be generally adopted, spite of its inconvenience.

TREATMENT OF NICTITATION.

Lazarus *(Wiener Med. Presse,* Oct. 27, 1872) states that he has always been successful in the treatment of confirmed cases of this disease by the following operation. A spatula is thrust under the upper eyelid to the edge of the orbit. Then a narrow bistoury is entered on the flat at the middle of the ciliary edge, and pushed between the skin and the orbicularis to a point two lines above the edge of the orbit. The edge is now turned backward and the knife drawn out, so as to divide the orbicularis, but not the tarsus. The superior palpebral artery and vein are thus necessarily divided, and there is some extravasation, but this is soon absorbed, and the nictitation is immediately relieved.

CAUSES OF BLINDNESS.

Hirschberg *(Berliner Klin. Wochenschrift,* Jan. 27, 1873) gives the statistics of 101 cases of blindness observed at his clinic in the course of three and a half years. When the two eyes were lost independently, the case is given under the head of the affection by which the second eye was lost.

Congenital, 3 (of which one only became entirely blind after some years).

Ophthalmia neonatorum, 16.

Later affections of the conjunctiva (blenorrhoica, diphtheritica, granulosa), 7.

Primary of cornea, 2.

Primary of uveal tract, 6.

Glaucoma, 12.

Myopia, 6 (two from posterior staphyloma, four from separation of retina).

Retinitis pigmentosa, 2.

Atrophy of opticus (genuine), 8.

Atrophy of opticus from disease of cerebro-spinal system, 11. (Of these, two children had symptoms of meningeal inflammation, one boy had an abnormal skull, and one girl had intra-cranial tumor. Seven adults had tabes.)

Neuritis optica from intra-cranial cause, 4 children.

Carcinoma of lid, destroying one eye, spreading to brain and blinding the other, 1.

Smallpox, 9.

Nervous fever, 2.

Unknown, 5.

Injury, 7. (Of these, 3 sympathetic of second eye.)

Bibliographical Notices.

The Passions in their Relations to Health and Disease. Translated from the French of Dr. X. Bourgeois, Laureate of the Academy of Medicine of Paris, &c. By HOWARD F. DAMON, A.M., M.D. Boston: James Campbell. 1873. Pp. 201.

ON reading, in this JOURNAL, of April 30th, an editorial on indecent literature, and on its quasi respectable endorsers, we felt, at least, the satisfaction that the authors were for the most part acknowledged quacks, and that the regular profession was free from any share in the diffusion of this evil. The book before us dispels this illusion ; it is trash, if not of the very worst, at all events, of a very bad kind, redeemed only by its weakness. It is in two parts ; the first treats of love, the second of libertinism. The following extracts show the scientific value of the book, which certainly tells us some things we did not know before. We venture to say that most anatomists are not aware that, though " the cerebral mass predominates in man ; in woman, it is the cerebellum and spinal marrow which preponderate."—(P. 18.) The physiologist may be interested by the symptoms of unbridled love. " The pulse is feeble, small, irregular, during the absence of the person loved; but, at her sight, at her remembrance, it becomes strong, tumultuous. There are on the one hand, violent palpitations of the heart, which predispose to hæmorrhages; on the other, an agonizing constriction, which oppresses the chest; chills alternate with fits of heat; sleep is short, agitated."—(P. 16.) Here is part of the " treatment of the affections engendered by disordered love." " For the consequences of violent emotions we shall employ the following remedies: *aconitum napellus,* if there is headache, flushed face, febrile movement, bleeding of the nose, or palpitation of the heart, above all in people of a sanguine temperament; *belladonna,* after the aconite, when the symptoms are not entirely dissipated, and there is joined to them a certain excitation of the brain; *chamomile (anthemis),* in very impressionable women, in order to combat the symptoms of nervous agitation, with tremblings, faintings, exaltation of the imagination, loss of appetite, diarrhœa; *pulsatilla,* in blond women, melancholy, with irregular menses, who suffer from palpitations of the heart; *nux vomica,* in choleric men attacked by gastralgia, habitually constipated and subject to hæmorrhoids. *These medicines will be given in the dose of ten to twenty drops of the alcoholic tincture in ten tablespoonfuls of water; four tablespoonsfuls of which are to be taken daily.*"—(P. 78.) (The last italics are our own.) If the first part is silly, the second is worse; the jumble of evil consequences of libertinism is worthy of any quack's advertisement. For the professional man, the book is useless; for any other, improper reading.

We cannot forbear quoting the advice "to cause hæmorrhoids to disappear by *nux vomica, cayenne pepper (capsicum), sulphur, mercurials, sepia,* the preparations containing *sulphur.*"—(P. 200.)

Such is the work by translating which, Dr. Damon, a Censor of the Suffolk District Medical Society, has seen fit to make himself notorious. The translation itself is pretty good, but some passages are delightfully naïve, as that on "Solomon forming in his palace a harem numbering seven hundred women and three hundred concubines."—(P. 90.) If Dr. Damon translated this solely for the edification of the profession, he has been guilty of nothing but wasting his time; but we cannot accept this charitable interpretation of his conduct, for in his preface he tells us that the book is for "instructors and heads of families," and an address to the reader, apparently by the author, states that "it is equally proper for married people and for young people." Such books are not new, but for one to be brought out by a censor of a prominent medical society, is as new as it is mortifying.

Manual of Chemical Analysis as applied to the Examination of Medicinal Chemicals. A Guide for the Determination of their Identity and Quality, and for the detection of Impurities and Adulteration. For the use of Pharmacists, Physicians, Druggists and Manufacturing Chemists, and of Pharmaceutical and Medical Students. By FREDERICK HOFFMAN, Ph.D., Pharmaceutist in New York. New York: D. Appleton & Co. 1873. 8vo. Pp. 393.

THE object for which this book appears to have been written is, to collect together in one volume the latest and best processes for the chemical examination of drugs and medicines for the benefit of pharmacists and dispensing physicians, and this object has been successfully accomplished.

The first part of the book is devoted to a description of the necessary reagents and chemical operations, and to a very short, and necessarily incomplete, systematic course of qualitative analysis, and volumetric estimation of the most important substances, each course being disposed of in fifteen pages.

The second and important part treats of all the most important medicinal chemicals and their preparations, in alphabetical order, giving a description of their physical and chemical properties, together with the latest processes for their examination. The subjects of accidental impurities and intentional adulteration are discussed in connection with each article whenever necessary. Valuable tables are interspersed throughout the work, by means of which speedy estimations may be made of the strength of various pure solutions, such as acids, alkalies, &c., by determining the specific gravity of such solutions, and in the appendix are given tables for the conversion of the Centigrade and Fahrenheit thermometric scales and the troy and metric system of weights. The nomenclature of the last United States Pharmacopœia is adopted, corresponding to the new chemical nomenclature, as, for instance, potassii hydras instead of potassæ hydras.

The book, throughout, is an eminently practical one, all of the processes and properties being described in a clear and accurate manner, and it will prove very valuable to those who, having a good practical knowledge of general qualitative analysis, have occasion to examine drugs and chemicals. Such previous knowledge is, however, necessary, since the short course described in the first part is too imperfect to be of any practical value.

E. S. W.

Florida and South Carolina as Health Resorts. By WILLIAM W. MORLAND, M.D. Harv. 1873. Pp. 20.

WE are glad to see this paper, which appeared in the JOURNAL of July 11, 1872, re-printed in pamphlet form. The need of a comfortable refuge for our invalids during the harsh winter and spring months of this part of the country, has long been felt by the profession, and, we hope, from the indications of improvement in the care of invalids and the increase in the numbers of those who avail themselves of these resorts, by the public also. It has always been a matter of surprise to us that the enterprising sons of the north did not long ago invade these sheltered climes, and that some luxuriant spot should not have become the seat of a southern Newport or Long Branch, where the invalid might find a place of rest, and the rich American some other spot than Paris to spend his money in. A combination of circumstances, none of which are easy to be overcome, appear to have prevented this much-desired result. Apart from southern apathy, which must have checked the enthusiasm of many an enterprising northerner, the great tide of western emigration and civilization has still left almost undeveloped this remote corner of our Union. The money-making proclivities of our race have hitherto left us little time for recreation, or to look around us and enjoy the beautiful country in which we live, until, of late years, the great increase in the number of the wealthy classes has created a demand for certain luxuries which it has never before occurred to our youthful country to afford. The "solid comforts" of Europe, added to the great variety in places of resort of the kind we allude to, have drawn large crowds of our countrymen across the Atlantic. Could a tithe of the money which is spent yearly by Americans in Europe be devoted to the development of a southern "watering-place," we should doubtless soon discover that great capabilities are still lying almost dormant on the beautiful shores of the St. John's River or beneath the pines of Aiken. Those who read Dr. Morland's interesting pamphlet will find that a pioneer work has already been accomplished at Magnolia, and that Dr. Geddings has done much to make Aiken a very safe and agreeable place to send consumptives to. One great stumbling block appears to us to still remain, however, namely, the very inferior means of transportation, whether by land or sea, which are still likely to disgust the northern traveller, or to counteract whatever benefit the invalid may hope to derive at his place of destination. Until a radical change in this respect has been effected, it cannot be hoped that these southern resorts can compete with their rivals on the other side of the water.

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10 *Wandtafeln zur Anatomie des Gehörorgans.*

PRIVATE advices from Prof. Adam Politzer announce a forthcoming work bearing the above title. The plates are representations of various parts of the organ of hearing, greatly magnified and especially intended for use in the lecture room, and are arranged as follows:—

Plate 1. Outer surface of the membrana tympani.
" 2. Inner " " " "
" 3. Inner tympanic wall with the stapes, stapedius and tensor tympani and canalis Fallopii.
Plate 4. Section through the external meatus and middle ear with the ossicula and labyrinth.
Plate 5. Region of the pharyngeal opening of the Eustachian tube with the topographical relations of the structures in the naso-pharyngeal space.
Plate 6. Microscopic section of the cartilaginous portion of the Eustachian tube, highly magnified.
Plate 7. The osseous labyrinth.
" 8. Section of the osseous and membranous semicircular canals; section of the cochlea and of the canalis cochleæ; the fenestra ovalis, viewed from within, with the base of the stapes in situ; section of the stapedio-vestibular articulation.
Plate 9. The organ of Cortii, highly magnified.
" 10. Twelve typical cases of disease of the membrana tympani.

The plates are to be 70 cen. high and 57 cen. wide.

There is no question as to the value of such a work both for purposes of study and for demonstration, and the name of the author is a sufficient guarantee of the completeness end exactness of its execution. C. J. B.

BOOKS AND PAMPHLETS RECEIVED.

The Channing Home, No. 30 McLean St. Report No. 5, for the year ending April 1, 1873. Boston. Pp. 10.

Ophthalmic and Aural Surgery Reports. By Julian J. Chisholm, M.D. Baltimore. 1873. Pp. 22.

CONVULSIONS IN AN INFANT PRODUCED BY DRINKING ON THE PART OF THE NURSE.—Convulsions in young children are known to be not unfrequently induced by the habit to which their nurses are addicted of indulging in alcoholic liquors, and that this fact may be kept before the minds of physicians, it is desirable that well-attested cases of this should from time to time be put on record in the medical journals.

M. Vernay reports an interesting case in the *Lyon Médical*, to which these remarks will apply, in which an infant was seized with convulsions, which continued with unabated violence for five successive days, in spite of the administration of bromide of potassium, musk, belladonna and warm baths.

It finally transpired that the nurse was in the habit of drinking from six to eight glasses of wine in the course of the day, besides taking considerable during the night. M. Vernay, thinking that the malady of the infant might have its origin in this habit of the nurse, took care that no wine should in future be furnished her. The result was that no further trouble was experienced on the part of the child.

Prof. Leroy has called attention to the deleterious habit of certain nurses of drinking freely of brandy or wine, whenever it suits their convenience to have the children under their care sleep for a considerable length of time.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, MAY 8, 1873.

THE TRIAL OF THE HOMŒOPATHS.

THE Board of the Massachusetts Medical Society for the trial of the homœopaths, adjourned for a fortnight, after a session of two days, to allow the accused additional time to prepare their defence. The Board sat with doors closed to all excepting members of the Society, so that it would be improper for us to give, at present, any details of the trial. Even if we did not desire to comply with the wishes of the Board, our self-respect would not permit us to imitate the daily papers in making affairs public which those who alone have the right to do so wish to keep private. We cannot disguise our surprise that, under these circumstances, the editors of reputable daily papers should be willing to publish imperfect and distorted accounts, surreptitiously obtained through the accused. The trial was held in private, according to a long-established and approved custom. What church, nay what typographical society, would wish all its proceedings in questions of discipline to be paraded in sensational reports, with prejudicial comments? The Massachusetts Medical Society has always striven to throw a veil over the sins of offending members, and if forced to expel them, to do so with quiet and decorum.

We are asked by the laity, why we cannot leave the homœopaths alone; we are told that we serve these men by giving them notoriety, and that the whole affair subjects the profession to general misrepresentation. Our answer is, that the Society considers it right, at any sacrifice, to free itself from those who dishonor it. We wish no ill to the accused, and we are indifferent to the popular clamor—we mean to do our duty, to ourselves and to the community.

When a man voluntarily joins a society, promises to abide by its by-laws, and subscribes to them with his own sign-manual, the least that can be expected of him is that he will conform to these by-laws, or, if he finds himself unable to do so, that he will peaceably withdraw. Not to do this, is conduct unbecoming and unworthy a member of any society. To remain in it while acting or believing, or professing to believe, in opposition to the letter and spirit of its by-laws, cannot be considered anything less than dishonorable. Yet such is precisely the position of the homœopathic members of the Massachusetts Medical Society.

Homœopathy is not now on trial; the medical profession throughout the world has long since decided on its merits. "It began as a delusion, and is now rapidly ending as a fraud," said the *British Medical Journal* but a few months ago. Yet the accused are not complained of because they are, or profess to be, homœopaths, but because, becoming so, ostensibly or in reality, they do not leave the Society, as they are bound in honor to do. If, a few years ago, here in Massachusetts, a member of an "abolition" society had become a slaveholder, would his inevitable expulsion have been followed by an outcry of "persecution"? The real question is, whether the Society must forever harbor and sustain, by its influence, those who, having pledged themselves to support its objects and principles, endeavor, on all occasions, to put it in a false position before the world. That their influence is little or nothing, is not to the purpose, their animus is the same. The profession has no desire to interfere with homœopathic practitioners outside of the Society, but simply declines to consort with them. In this there is no injustice to the latter; the wonder is, that they should wish to force themselves where they are not wanted, and to put themselves under the protection of those whom they are ever ready to vilify. The cry of "persecution" will not avail long; the public will soon see the matter in its true light, though reporters and editors may prate about "star chambers" and "illiberality." The only "persecution" visible, is the misreprentation to which the Society has been subjected by "the Press," and this is of very little consequence.

IMPROVED GLASS SLIDE FOR MICROSCOPES.—At a recent meeting of the Biological and Microscopical Section of the Academy of Natural Sciences *(Phil. Med. Times)*, Dr. D. S. Holman exhibited an improved slide for microscopes, and explained its construction and mode of manufacture. The slide in question is composed of the ordinary slip of glass, but, instead of the customary plain surface, two concave depressions are ground in the upper side, and connected by one or more shallow canals, carefully cut in such a way as to present on transverse section a gradually increasing depth. In using this slide, each excavation is to be partly filled with the fluid under inspection, and the remaining space in each is to be charged with common air; the large thin glass cover being applied so as to seal up both cavities, as well as the communicating canal. The covering glass is retained in position by atmospheric pressure. In this way is secured what is termed a double *thermal pressure chamber*, either division of which can be made to emit a minute portion of its contents through the delicate canal, and pass the same into the opposite depression, by means of the sensible heat radiated from a single finger of the operator brought near it for that purpose. The most complete control is thus obtained over even a single red blood-corpuscle, which may be arrested in the canal, held stationary under observation, and actually turned over in the focus.

Correspondence.

LONDON LETTER.

(*From our Special Correspondent.*)

Medical Women in London—The London Medical Council—The Movement for Education and Registration of Midwives—The Intentions of the Government—The Anatomy of Tubercle—The Beginnings of Life—Bastian, Huxley and Sanderson —The next Meeting of the British Medical Association.

LONDON, April 14, 1873.

LONDON has been very busy lately—that is, medical London—discussing questions of great importance in medical politics as well as in medical science. The political questions raised here have been debated in the General Medical Council and by the British Medical Association. Perhaps one of the most widely interesting of these relates to the education of women in one of the branches of medical science and practice—midwifery. Against the admission of women to medical practice generally, there is a very strong and general prejudice. Indeed, although one or two ladies have attained a recognized practice here, as medical practitioners, it is not certain that in their progress they have not rather strengthened than diminished the existing objections to female medical practice. Not by any fault of their own, for the two ladies who have reached to the heights of practice have, by a very moderate, guarded and judicious course of conduct, conciliated for themselves a large amount of personal regard and respect. But the determined efforts which have been made by a few others to follow them have been met by a still more determined resistance. The doors have been more strongly barred than before, and the chink in the portal of the Apothecaries' Society, by which Miss Elizabeth Garrett (now Mrs. Garrett-Anderson) found her way into the ranks of English practitioners, has now been closed. At Edinburgh University, a quite hopeless and fruitless struggle is carried on, the lady applicants being now further off from the possibility of realizing their wishes in that University than they were two or three years ago. Those English girls who seriously incline towards medical pursuits are, perforce, directed to foreign universities—those of Paris or Zurich.

A Woman's Hospital, officered by Mrs. Garrett-Anderson and Miss Elizabeth Morgan, flourishes, however, greatly; and if, presently, some of our English girl graduates return here, and prove by practice that the popular opinion of British physicians of the unfitness of women to become physicians is contradicted by many examples, it is possible that we may see a reaction in their favor, of which as yet there are no symptoms. A rather amusing story is current just now about Mrs. Anderson, which serves to illustrate the ground of English prejudice to feminine invasion of male pursuits. Mrs. Anderson has been married now for about two years, and as she is a person of some note, socially and professionally, she is much talked about. It was lately very generally reported that she was likely soon to be a mother. For some reason she seemed to think that such a report ought not to be allowed to pass uncontradicted, and she has adopted the remarkable step of writing to a physician, who was one of those who had repeated the rumor, denying its accuracy, and requesting that he would take proper occasion of contradicting a statement which was likely to be injurious to her practice. This seemed to me incredible, but it has been confirmed as a fact; and the notion that a married woman should think it due to herself to contradict the statement that she was *enceinte*, has a sad and serious as well as a ludicrous side to it, to those who think that the highest ambition of any woman is to become a mother, and that the greatest misfortune which can happen to her is to fail in that high mission and noble ambition of womanhood and wifehood.

Those, however, who look askance at women doctors, agree that there is a good and strong reason for wishing and helping to give a better education and a more defined status to the large class of women who now officiate as midwives. I don't know what may be the custom with you; but we have here, as in all European countries, a very large number of poor women employed in this capacity. *Cheap midwifery* is the horror of medical men; and with our number of poor women there must always be a great demand for persons willing to undertake laborious obstetric duties among the poorest classes for very small fees. It is stated, indeed, that there are in this country an army of 10,000 midwives, and that in manufacturing towns and sparsely inhabited rural districts, from one-third to one-half of all the women are attended in their confinements by midwives. These midwives are very poor women, some of whom have had a little instruction at lying-in hospitals or in connection with maternity charities, but that is exceptional. They receive fees varying from ten shillings a little more or less. They act as midwives, nurses, and often as char-women; they fill in their time with house duties, and are commonly the wives or widows of working men. They are least dangerous perhaps when most ignorant, for then they most readily fly for help in times of difficulty and danger. But it is hard to say how immensely they add, on the whole, to the pains and dangers of complicated labors by their delays, devices and errors. Our Obstetrical Society of London have lately instituted a voluntary examination for those who wish to present themselves, but a very small number only have thus far shown any desire to avail themselves of this very easy test.

A movement, headed by Dr. Acland in the General Medical Council, by Mr. Ernest Hart in the British Medical Association, and by Dr. Aveling in the Obstetrical Society of London, has been set on foot for the purpose of inducing the Government to institute an authorized examination for midwives, to establish a public and legal register for them, and to assist in forming a sufficient number of centres of education. Mr. Stansfeld, the head of the department of public health and of public medical relief (Minister for Public Health and Poor Law Administration), has expressed himself very favorably inclined to such a scheme, and has undertaken, with other members of the Cabinet, to take the initiative in introducing a measure for the purpose under Government auspices; this alone offers a secure chance of early achievement, for Parliament is so crowded now with public bills that it is almost impossible to secure private legislation—that is, to pass bills introduced by private members—unless they be of the simplest character and quite unopposed. Mr. Stansfeld is exceptionally likely to help the measure, being the brother of one of the lady leaders of the woman's right movement, and himself a shining light in that party.

The movement is so well launched that it is really likely to come to a practically successful conclusion, if common discretion be shown in conducting it. Dr. Acland proposes, also, to form a register of female pharmacists and female nurses, and to give them an authorized status also. But there is, in truth, nothing now to prevent females from acquiring full rights as legalized, educated and registered pharmacists in this country, and three ladies are at this moment studying for the purpose. As to nurses, it does not seem necessary that any legislative interference should be made in their favor. They have almost a monopoly of that field of activity, and there are more training institutions for them than applicants for the training.

The chief scientific topic of the last fortnight has been a discussion on the Anatomy and Relations of Tubercle, in the Pathological Society of London, which has occupied three nights. But of this I must give you an account in another letter. It will mark a distinct period in pathological science here.

We have been greatly interested in the debates between Dr. Bastian, F.R.S., the author of a powerful and elaborate series of researches and arguments in favor of the doctrines of spontaneous generation, and his critics. It has been going on now for two years. At first, Bastian was treated with something of scornful rudeness by eminent biologists, such as Huxley and Tyndall; and his recent book on "The Beginnings of Life," was assailed by the younger followers of Huxley with a violence which, as usual, overshot the mark. Bastian had, among other things, demonstrated, by a long series of experiments, that certain organic infusions, enclosed in flasks exhausted of air by ebullition, at temperatures destructive of organic life, and left in these sealed and exhausted flasks, presently swarmed with life. Lankester, and several other of our ablest young biologists, failed to confirm these experiments, and treated Bastian as a sciolist and blunderer. Dr. Sanderson, however, the head of the highest school of medical physiologists, has repeated the experiments, and has confirmed them. So have others since. It is now, therefore, necessary to show whether temperatures hitherto believed by Pasteur and others to be destructive of organic life, really are so. The Royal Society has been the scene of some animated debates lately on short notes by Bastian, in which he aims at settling this question affirmatively, and thus clinching the proof of the theory of spontaneous generation. Huxley is the Secretary of the Society, and has to read these notes. He fights his ground, however, inch by inch, and although one-half of his territory is cut away from him, he is at present far from surrendering the other. But it is very certain that the question is closing up, and men such as Darwin and Mivart, who till lately looked on with indifference, are now watching the debate with great interest, and their opinion is that Huxley has not the best of it. The Easter holidays have brought a truce. Sanderson has gone to Italy to spend the vacation amongst the physiologists of Venice and Florence. The Royal Society is closed for a fortnight, but after the vacation the contest will be renewed.

Schiff, Kolliker and Oscar Liebreich are here just now; and we expect a considerable gathering of Continental savants for the annual meeting in London of the British Medical Association, which will take place in the first week in August, under the presidency of Sir William Fergusson. We hope also to see a good number of our American brethren here on that occasion. It will be the greatest meeting which the Association has had since it was first founded. The Lord Mayor gives a special reception, and also the College of Surgeons, and the addresses are by Professors Parkes, Sanderson and Erichsen.

Medical Miscellany.

THE Annual Meeting of the Massachusetts Medical Society will take place on June 3d and 4th.

DRUG STORES IN THE UNITED STATES.—There are 14,000 drug stores in the United States, and the number of persons employed in the various branches of the drug business is estimated at 135,000.

THE Chief of the Medical Division of the Pension Office is about to make a pretty thorough reorganization of his corps of examining surgeons throughout the country, since a number of them, it is alleged, are not so prompt and careful in their duties as it is desirable that they should be.—*Phil. Med. Times.*

A TENACIOUS COLLODION FILM.—A collodion film of considerable strength may be prepared by making a concentrated solution of gun-cotton in equal volumes of ether and absolute alcohol, and adding to it a small quantity of balsam of copaiba. This collodion solution, when largely diluted with ether and alcohol, may be used for rendering linen and cotton fabrics water-proof.—*Boston Journal of Chemistry.*

THE "respectable" *Boston Daily Advertiser* of April 30th has the following passage concerning the trial of the homœopaths:—

"The proceedings were conducted with closed doors. Our reporters were enabled, however, to obtain a comparatively full report, which is presented in our news columns."

Very creditable!

THE carcass of a horse was dissected in Edinburgh a few weeks since, with the result of extracting from the stomach a large dust-ball as hard as stone, about twenty-three inches in circumference, and weighing eight pounds. The animal had been fed on mill-dust.—*Phil. Med. Times.*

THE ABUSE OF PRESCRIPTIONS.—A recent order of the *Staathalterei* of Lower Austria calls attention to the frequency with which mere copies of physicians' prescriptions are employed, in supplying medicines containing articles specially marked in the Pharmacopœia as to be used only under professional direction; and especially to the custom of midwives to use old prescriptions of ergot and its preparations. To obviate these evils, medical men are desired, when they prescribe any of the articles referred to, to add the words "ne repetatur"; and the apothecaries are not to dispense a prescription so marked more than once. Ergot is only to be supplied if the prescription have been written on the day of application or the previous day. If a prescription containing ergot is presented a second time, or after the date mentioned, the apothecary is to detain it, and inform the person presenting it that a new one is necessary.—*British Medical Journal.*

NOTES AND QUERIES.

THE AMERICAN MEDICAL ASSOCIATION. *Messrs. Editors,*—A re-formation of this Association now seems inevitable. Let not its managers waste the golden opportunity in half measures. Can any better plan be proposed than that in this JOURNAL, July 25th, 1872, p. 68? We think not. Certainly none have as yet appeared to compare with it. It is thoroughly practicable, and can be adopted without revolution or the slightest commotion. It is the only plan yet proposed that will place the Association permanently upon a truly elevated professional and scientific basis. The suggestions of the *New York Medical Record*, Chicago advocates, and others, will merely cause further failure if adopted. They do not make membership, or positions therein, sufficiently honorable or attractive. The huge "Committee on Ethics" would soon become an elephant. Such half-way measures will only prolong expiring struggles. "To save from dying" is the impending and urgent necessity of the hour. A word to the wise and experienced attendants ought to be sufficient.

WELL-WISHER.

MORTALITY IN MASSACHUSETTS.—*Deaths in sixteen Cities and Towns for the week ending April* 26, 1873.

Boston, 137—Charlestown, 19—Worcester, 20—Lowell, 19—Milford, 1—Chelsea, 3—Salem, 16—Lawrence, 10—Springfield, 6—Lynn, 20—Fitchburg, 6—Taunton, 5—Newburyport, 6—Somerville, 6—Fall River, 22—Haverhill, 8. Total, 304.

Prevalent Diseases.—Consumption, 44—pneumonia, 32—cerebro-spinal disease, 28—scarlet fever, 9—smallpox, 9.

Deaths from cerebro-spinal disease are reported as follows:—Boston fourteen, Lynn seven, Charlestown three, Lowell two, Haverhill one, Salem one. Deaths from smallpox are reported as follows: Boston three, Worcester three, Springfield, Taunton and Charlestown one each.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, May 3d, 143. Males, 76; females, 67. Accident, 4—apoplexy, 1—inflammation of the bowels, 7—bronchitis, 6—inflammation of the brain, 1—congestion of the brain 1—disease of the brain, 2—cerebro-spinal meningitis, 12—cancer, 2—cholera infantum, 1—consumption, 29—convulsions, 1—croup, 1—debility, 2—diarrhœa, 1—dropsy, 3—dropsy of the brain, 2—diphtheria, 1—erysipelas, 1—scarlet fever, 15—typhoid fever, 2—fistula, 1—homicide, 1—disease of the heart, 4—disease of the kidneys, 5—disease of the liver, 2—congestion of the lungs, 1—inflammation of the lungs, 11—marasmus, 2—old age, 6—pleurisy, 1—premature birth, 2—puerperal disease, 1—pyæmia, 2—poisoning (lead), 1—smallpox, 2—teething, 1—tumor, 1—white swelling of knee, 1—unknown, 3.

Under 5 years of age, 54—between 5 and 20 years, 15—between 20 and 40 years, 32—between 40 and 60 years, 28—over 60 years, 14. Born in the United States, 101—Ireland, 26—other places, 16.

THE

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Original Communications.

RŒTHELN—GERMAN MEASLES.

Read before the Roxbury Medical Club, March 26th, 1873.

By B. E. Cotting, M.D. Harv.

In the latter part of the winter, and through the spring months of 1871, an exanthematous disease, in most instances of no very great severity, prevailed in some parts of Roxbury; to such an extent, however, as to cause abundant local popular gossip, as well as frequent professional remark. It was occasionally attributed to improper diet, but cases subsequently occurring in the same households soon refuted the unfounded assumption. It was not always recognized at first as a distinct affection by medical attendants, nor, when so recognized, easily assigned to a satisfactory place in classification or nomenclature. One of our number, however (Dr. A. H. Nichols), happily hit upon a name which was readily accepted by the laity, and which answers well enough for all practical purposes, and for distinguishing the disease from others with which it is liable to be confounded. The name, thus originating with us, was "German Measles,"—a name which was also used by a writer in the *Edinburgh Medical Journal* for May, 1872, a year or more later.

Although a year seldom passes without the occurrence of some sufficiently well marked cases, yet the number of families invaded in the early part of 1871, and the number of individuals sometimes then attacked in detached houses, caused frequent inquiry whether this affection with a foreign appellation was in reality a new importation, or whether any such disease had ever been heard of before in this vicinity. I was thus led to hunt up a paper which I prepared for the Norfolk (Mass.) District Medical Society in September, 1853, and which I will now give as then read to that Society. The paper was entitled Rötheln, and is as follows:—

During the year 1852, scarlet fever existed in Roxbury to a moderate extent—no single month being without its cases. In the early part of the present year, 1853, the disease increased, and became most frequent in the latter part of February and in March. After this time, there were fewer cases, though it cannot be said to have yet (Sept., 1853) entirely disappeared.

During a part of the past summer, the measles prevailed—at times so extensively as to depopulate many of the primary schools. Of late, but little has been heard of this disease.

In the latter part of the spring and quite into the summer, another and probably quite a different disease became also prevalent. It appeared as the scarlet fever declined, or about the first of April, and was quite common before the measles had reached the greatest frequency. While in some cases it greatly resembled the measles, and was called so, in others it appeared more like scarlet fever, and received that appellation. It seemed to be more directly connected with scarlet fever, and to have followed more immediately in its wake than in that of the measles. It was particularly marked in those who had previously had both scarlet fever and measles; and indiscriminately attacked both adults and children. So far as could be ascertained, it offered no protection against either of these diseases. Though at first, in many instances, resembling measles, the disease would most often, in its earlier stages, appear like scarlet fever. Frequently it would suddenly change and seem to be measles; again it would exhibit appearances dissimilar to both. Persons familiar with scarlet fever and measles were puzzled in their estimate of this disease. And the frequent rumors of cases of a "double disease" (of both scarlet fever and measles at the same instant, in the same individual, who may have had both of these diseases previously), indicated an unsolved mystery or an unusual anomaly.

As for differential diagnosis, our limited observations have not enabled us to point out any one feature so universally constant as to indisputably mark the disease. This is especially referable to the earlier stages—the history and progress of the attack leaving less doubt as it advanced. Nevertheless the incursion differed from scarlet fever in the less severity and amount of throat disturbances; and from measles in the slight degree or entire absence of catarrhal symptoms. The rash appeared usually in spots or patches less extensive than scarlet fever; but, individually, larger and in less crescentic areas, than measles. After pressure, small dots or points appeared previous to the return of the uniform blush, as in scarlet fever. The eruption showed itself early, often within the first twenty-four hours of the attack—was more irregular in its forms, and came out more simultaneously on all parts of the body, than in scarlet fever or measles. The rash often disappeared without sensible desquamation of the cuticle—never in the large flakes sometimes observed after scarlet fever. The duration of the rash seldom reached that of scarlet fever or measles—usually not extending beyond the third day.

Under the different and ill-defined titles of Rubeola, Roseola, Rosalia, Rosalia spuria, Scarlatina hybrida, &c., various authors, both in works on diseases of the skin and in special treatises, have indicated the existence of cases such as we have described. Their descriptions, however, by no means exactly cover our observations, which seem rather to agree with some of the forms described at times by the Germans under the name of Rötheln. The *Edinburgh Journal,* in 1840, and the *British and Foreign Review,* in 1843, called attention to the subject; and Dr. Homans, Sen., gave an account of cases in his own practice in a paper read before the Boston Society for Medical Improvement in 1845. Whether the sketch we have now given relates to imperfect forms of scarlet fever or measles, a so-called "bastard" or hybrid, or to what will prove to be a distinct disease, must be determined by the combined experience of future observers; but when we reflect that it is hardly more than half a century since the diagnosis between scarlet fever and measles was definitely decided and accepted, it will require no very great effort to admit the possibility of another disease intermediately between the two. At any rate, the present confusion is disagreeable and often embarrassing; and, what is of more consequence, may, through careless diagnosis, lead patients into unnecessary exposures by supposed previous protection.

The foregoing description of rötheln as it appeared in this neighborhood about twenty years ago, would answer, so far as my own observations have extended, equally well for the same disease in 1871. In both instances it was epidemic, and attacked those who had previously had, as well as those who had not had, scarlet fever and measles. When one member of a family was seized, others generally were afterwards taken down; and in these cases there seemed to be an incubation of about three weeks—a longer time than usual with scarlet fever or measles.

In both these epidemics, and in scattered cases seen in the interval, the opinion, then based upon independent personal observations, has been strengthened and confirmed—that there is in these cases a specific disease, to be accepted as such, and to be distinguished from other affections most likely to be confounded with it.

Rötheln is not a new disease (if in fact there are any such), but, whenever noticed, it has most frequently been treated of as a variety of some other affection. Though the term "rötheln" has been in use, at intervals, for more than a century, descriptions under it as given from time to time, have been so mixed and so confused that they can seldom be referred to one and the same disease, and are often irreconcilable with each other. A short summary of what has been published, properly systematized, and relating unequivocally to the disease we have endeavored to describe, would be of great service.

In the first number of a new periodical, the *Révue des Sciences Médicales*, January, 1873, received here only a few days ago, and since the above was written, there is an analysis of an article by Prof. Thomas, of Leipsic, on an epidemic of rötheln, as it prevailed in the city of Leipsic in 1872, which so remarkably confirms the observations made here in 1852, and since that time, that an abbreviated translation will form a fitting conclusion to the present paper. From cases in his own practice, Prof. Thomas concludes:—

Rötheln is a specific contagious exanthem, which should be kept clearly distinguished from scarlet fever and measles.

The duration of the incubation of the disease varied from seventeen to twenty-two days. The eruption was often the initial phenomenon; and there was no constant prodromic stage observable. Frequently, the eruption appeared in children who had previously shown some catarrhal symptoms. Some had a slight injection of the conjunctiva and irregular redness of the soft palate and pharynx, with slight difficulty of deglutition, generally of a temporary character. The injection of the palate followed the same changes as the eruption itself, and disappeared at the same time as the latter.

The eruption, in general not very abundant, appeared in spots, isolated, sometimes slightly curvilinear or elliptiform, most frequently of a bright red color, occupying all parts of the body. It was most abundant on the face, forehead, cheeks and chin ; being frequently accompanied by slight œdema in these parts. Sometimes, the hairy scalp was invaded. Less confluent on the neck and trunk, it was even more discreet on the limbs—the thickness of the epidermis almost completely obscuring it on the soles of the feet and the palms of the hands. These spots were more rounded, less jagged, more maculated, less papular and less prominent than those frequently seen in the early eruption of measles; though there were cases where the similarity was so striking as to render distinction at first quite difficult.

The duration of the eruption was generally short—averaging three days; and desquamation was never observed by Prof. Thomas in his cases, which ranged from children of three years to an adult of thirty-five years of age.

Prof. Thomas insists particularly upon the distinctive thermic characteristics between rötheln and measles. In rötheln the thermic elevation, if any, shows its maximum on the appearance of the eruption, which in itself is very precocious; while regular measles may be distinguished by an initial fever preceding the eruption, and by having the greatest thermic elevation when the exanthem attains its height.

Roxbury, Boston, March, 1873.

ACUTE RHEUMATISM IN INFANTS.—In a very complete monograph on Rheumatism in Infants, founded on the very few documents that exist upon the subject, and numerous observations of his own, M. Picot finds that—

Contrary to the old-received opinion, rheumatism is a very common affection in children from seven years and upwards, and has been observed at as early an age as seven months.

The symptoms are generally less intense, and less prolonged than in adults, but relapses are more frequent in infants, as well as cardiac complications, even in milder cases, so as to be considered the rule. Sometimes, these cardiac complications depart without leaving any trace, but in others they end in organic changes which prove rapidly fatal. Pleurisy of the left side frequently follows cardiac symptoms. The nervous system is quite apt to be involved, and to present marked peculiarities. Thus cerebral rheumatism, so inclined to forms of delirium and meningitis, in infants more frequently becomes choraic. Chorea is often a manifestation of rheumatism ; it follows, accompanies or, more rarely, precedes articular pains. It accompanies very often, but not always, cardiac affections. Chorea and an affection of the heart can exist at the same time in an infant, without any articular disturbance at all. Rheumatismal chorea seems to be one of the manifestations of the action of rheumatism on the nervous centres, and more particularly upon the spinal cord and its envelopes.

Visceral manifestations of rheumatism are more frequent in the young than in adults.—*Journal de Médecine et Chirurgie Pratiques.*

Clinical Lecture.

BLOODY, WATERY, OR OTHER DISCHARGES FROM THE EARS, NOSE, OR MOUTH, AS SIGNS OF FRACTURE OF THE BASE OF THE SKULL.

Part of a Clinical Lecture, delivered at the Massachusetts General Hospital, by R. M. Hodges, M.D.

In addition to ecchymosis of the eyeball as a sign of fracture of the base of the skull (see this Journal, April 17, 1873), ecchymosis of the retro-pharyngeal mucous membrane, attended by a difficulty in swallowing, is sometimes present. In the case which suggests these remarks, the severity of the injuries prevented a search for this symptom.

Fracture of the base of the skull may also be accompanied by certain discharges from the natural orifices of the face. Cerebral matter, blood, or a serous fluid, may escape in variable quantities, singly or simultaneously, from the nose, mouth or ears.

Cerebral matter, exuding from the nose or ears, can only be evidence of extensive and comminuted fracture, the existence of which would doubtless be demonstrated by other indications of equal, or even greater, distinctness.

A discharge of blood from the ear is of common occurrence, but was not noticed in the present instance. The symptom is of importance only when the hæmorrhage is abundant, continuing many hours, or several days, and a rupture of the membrana tympani is demonstrated. It may come from an extravasation within the cranium, or from a rupture of the vessels in the petrous portion of the temporal bone, and must follow a line of fracture through the walls of the tympanum, finding an exit through the ruptured membrana tympani into the external auditory canal. If the fracture lacerates the lateral sinus, or the carotid artery in the carotid canal, the hæmorrhage may prove fatal.

Bleeding from the ear attends so many injuries of the head, independent of fracture of the base, that its value as a symptom is much diminished. Wounds of the auditory canal, fracture of the mastoid process, or even simple rupture of the membrana tympani, may cause a very considerable loss of blood from the orifice of the ear.

For similar reasons, hæmorrhage from the nose, or the spitting and vomiting of blood, have but little significance. After a fracture through the petrous portion of the temporal bone, the tympanic membrane remaining intact, blood may reach the throat through the Eustachian tube. Hæmorrhage from both nose and ear has been observed, the Eustachian tube, as well as the ruptured tympanic membrane, furnishing outlets for its discharge.

After fracture of the base of the skull, a colorless and limpid fluid sometimes oozes from the ear or ears, or from the nose; and this may follow the accident at once, or be preceded by a flow of blood. In the patient so often alluded to it did not occur immediately after the injury. It was first noticed, at the end of twelve days, in the left ear, and a week later in the right. It was accompanied by deafness, lasted seventeen days, and was enough to soil the pillow and require absorption by handkerchiefs.

Of the frequent coëxistence of this symptom with fracture of the base of the skull, there can be no doubt. Although at present universally recognized, it was only first described in 1839. Of the source of the fluid there has been, if there is not still, a very great degree of doubt.

It has been thought to be the serum of blood effused within the cranial cavity, weeping out through a fissure in the temporal bone, after the manner already described for the escape of blood. It has also been supposed to come from the labyrinth of the ear, and to be the liquor Cotunnii. Apart from the fact that the latter fluid exists naturally in very small quantity, and is secreted from a surface of limited area, the best refutation of this supposition is its failure to account for the discharge when it comes from other apertures, as the nose and mouth. A third theory, that it is the cerebro-spinal fluid, is supported by the nature of the anatomical lesions, and by chemical analysis. It contains a very small quantity of albumen and twice the amount of chloride of sodium which is found in the serum of the blood.

That the cerebro-spinal fluid should escape by the ear, there ought to be a fracture into the cavity of the drum, a rupture of the arachnoid and a laceration of the membrana tympani. The flow generally lasts from four to seven days, and exudes at the rate of about one drachm per hour. The conditions above named have been found in many autopsies of patients who, during life, presented this symptom. But other cases have been noticed where, although they were all present, no flow of fluid took place from the ear; and, still further, in a case which furnished sixty-three ounces in one hundred and six hours, on *post-mortem* examination, six years after, no vestige of fracture was found. There was a cicatrix of the membrana tympani, and the traces of an old inflammation of the drum. In another instance, for six days before death, the leakage was such that more than two ounces of fluid were collected in an hour, and yet a careful examination could find no communication between the middle and internal ear. The mucous membrane of the drum, and of the mastoid cells, was much injected, and the membrana tympani largely torn. Cases, also, have been reported where, without rupture of the membrana tympani, or any fracture of the petrous bone, a large flow of serous fluid has followed hæmorrhage from the external ear consequent upon perforation of the external auditory canal by a fracture of the neck of the inferior maxillary bone.

These and similar facts show that this symptom, considered by itself, is not pathognomonic of fracture of the petrous portion of the temporal bone. It has, nevertheless, an important significance, dependent, largely, perhaps, on the intelligence with which the circumstances of its appearance are appreciated.

These vary, and may be (1) a serous flow from the ear, soon after the accident, preceded by a slight or even no hæmorrhage; or (2), an abundant hæmorrhage from the beginning, giving place, after several hours, to an escape of watery fluid; or (3), a hæmorrhage, unmistakable, but of short duration, and, sooner or later, succeeded by a serous discharge.

In the first case supposed, where the flow follows the accident promptly, is perfectly serous, abundant, increased by coughing, sneezing, or by position of the head, the existence of a fracture through the petrous portion of the temporal bone might safely be asserted, and chemical analysis would doubtless confirm the diagnosis, by proving the fluid to be cerebro-spinal.

In the second case, where hæmorrhage precedes the serous oozing, and it has been copious and prolonged, a fracture may be inferred, but this inference is drawn from the character of the hæmorrhage, rather than the exudation of watery fluid.

In the third case, where, after a slight and brief hæmorrhage, a discharge from the ear comes on, varying in quantity and in nearness of date to the injury, the existence of a fracture through the petrous portion of the temporal bone cannot be inferred with any degree of confidence.

It is to this last category that the case of our present patient belongs. It differs only in the absence of preëxisting hæmorrhage, which may have escaped observation after the accident, owing to the gravity and the number of injuries. The watery discharge has lasted many days, and has been profuse; and, although taken alone, it would not justify the diagnosis of a fracture of the base of the skull, other symptoms, previously enumerated, ecchymosis of the eyeball, sluggish intellect, dilated pupil, deafness, headache, pain on moving the head, slow and irregular pulse, uphold the suspicion of this lesion, although its actual existence is incapable of being confirmed.*

The discharge of water from the nose, in connection with a fracture of the base of the skull, is much more rare than from the ear. It presents similar chemical and physical characters to that which comes from the latter orifice. After a violent injury to the head, it would authorize the inference that a fracture existed, probably of the sphenoid bone; unless, as in certain cases of hæmorrhage already mentioned, the fluid comes, by way of the Eustachian tube, from a fracture of the temporal bone in which the membrana tympani is unruptured.

Magendie has shown that the temporary withdrawal of the cerebrospinal fluid is followed by rapidly produced cerebral disturbance; yet its escape in connection with fracture of the base of the skull has not been thought, by many observers, to influence the prognosis, which, always grave, is by no means so hopeless as was formerly supposed. Most museums contain specimens which prove a considerable duration of life after the infliction of this injury.

Occasionally, in fractures of the vault of the cranium, this same leakage of cerebro-spinal fluid takes place, and may be, in itself, a dangerous symptom. The operation of trephining for epilepsy was once undertaken in this hospital upon a patient with an apparent depression over the parietal bone, of long standing and traumatic origin. It was found that a loss of substance and thinning of the cranium alone existed. In clearing the spot at which the trephine was to be applied, a minute opening was made in the adherent cerebral membranes, and a profuse flow of cerebro-spinal fluid took place, followed almost immediately by frequent convulsions. Although the intended operation was not proceeded with, a fatal result occurred in seven days. The existence of this symptom in connection with any fracture of the skull ought, therefore, to be looked upon as an unfavorable circumstance. The severity of the accompanying lesions, the probable effusion of blood within the cranium, and the injury to the brain itself are, however, of more value in forming a prognosis than the circumstances attending a loss of cerebro-spinal fluid.

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* Dr. H. L. Shaw has had the kindness to examine this patient's ears, since the discharge has ceased, and states that the membrana tympani of the left ear is still perforated, while that of the right ear presents the apparent cicatrix of a recent laceration.

The length of time which has elapsed since the accident, and the gradual improvement which has occurred, authorize the expectation of recovery in the case which has been under discussion.

Progress in Medicine.

REPORT ON DISEASES OF THE THROAT.*

By F. I. Knight, M.D. Harv.

Books and Monographs.

Traité Pratique des Maladies du Larynx et du Pharynx. Par le Docteur L. Mandl. Avec 7 planches gravées et coloriées, et 164 figures intercalées dans le texte. Paris: J. B. Baillière et Fils. 1872. Pp. 816.

Die Anwendung der Galvanokaustik im innern des Kehlkopfes und Schlundkopfes, sowie in der Mund- und Nasenhöhle und den Ohren, nebst einer Kurzen Anleitung zur Laryngoskopie und Rhinoskopie. Von Dr. Rudolph Voltilini, Professor an Universität zu Breslau. Zweite voltständig umgearbeitete Auflage. Wien. 1872. Braumüller. Pp. 317.

Die locale Behandlung der Krankheiten der Athmungsorgane. Lehrbuch der respiratorischen Therapie. Von Dr. L. Waldenburg, Prof. e. o. an der Königl Universität in Berlin. Zweite neu bearbeitete und stark vermehrte Auflage. Mit 12 Holzschnitten. Berlin. Verlag von Georg Reimer. 1872. Pp. 782.

Die Diptherie. Eine Monographie nach eignen Untersuchungen, und Beobachtungen von Dr. med. Ludwig Letzerich. Mit 2 lithographirten Tafeln. Berlin. 1872. Hirschwald. Pp. 33.

Samlung Klinischer Vorträge (Volkmann) No. 36. I. Ueber Laryngoscopie von C. Störk. II. Ueber Diagnose und Behandlung der Stimmbandlähmung von C. Gerhart. Leipzig. Breitkopf und Härtel. 1872. Pp. 22.

Ueber Krebs der Speiseröhre. Inaugural Dissertation zur Erlangung der Doctorwürde in der Medicin und Chirurgie, &c. Von Max August Fritsche. Berlin. 1872. H. E. Oliven. Pp. 93.

De la Thrombose Cardiaque dans la Diptherie. Par Robinson Beverly, Docteur en Médecine de la Faculté de Paris, Interne des Hôpitaux de Paris. Paris. 1872. Delahaye. Pp. 113.

Etudes Laryngoscopiques. Diagnostic des Paralysies motrices des Muscles du Larynx. Par le Dr. Emile Nicolas Duranty. Avec planches. Paris. 1872. J. B. Baillière et Fils. Pp. 47.

Contribution à l'Etude du Croup. Par le Dr. J. Callandreau-Dufresse. Paris. 1873. Delahaye. Pp. 74.

Ueber ein neues gefahrloses Verfahren zur Entfernung von Kehlkopfgeschwülsten. Von Dr. Friedrich Fieber. Wien. 1872. Verlag von Karl Czermak. Pp. 20.

Die Gewinnung vergrösserter Kehlkopfspiegelbilder, nebst einer Kurzen Darstellung der Theorie der Kehlkopfspiegels. Von Dr. A.

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* Second semi-annual Report.

Weil, Privatdocent, &c., in Heidelberg. Heidelberg. 1872. Bassermann. Pp. 36.

Mysteries of the Voice and Ear. By Prof. O. N. Rood, of Columbia College. University Series, No. 10. Chatfield & Co. New Haven, Conn. Pp. 41.

NARES.

(1.) Kurze Mittheilung über die Anwendung von Injectionen in den Nasencanal, nebst Beschreibung einer von mir dazu augegebenen Spritze, zugleich mit Berücksichtigung der Injectionen in den äusseren Gehörgang. Weigersheim. Ein Vortrag, Gehalten in der Gesellschaft für Heilkunde in Berlin. (Hierzu Abbildungen.) *Deutsche Klinik,* Dec. 7, 1872. [Nothing new.]

(2). Naso-pharyngeal Polypus in a Girl of fifteen. *Lancet,* Oct. 19, 1872, p. 561. [Report of a case in the wards of Dr. Léon Labbé at La Pitié, Paris. The soft palate was slit up by the galvano-caustic knife, and the tumor removed by means of the galvano-caustic wire.]

(3.) Zur Operation der Nasenpolypen. Ed. Wimmer (Dresden). *(Archiv der Heilkunde,* 6 Heft, 1872.) *(Allgemeine Medicinische Central-Zeitung,* Dec. 18, 1872.)

(3.) Dr. WIMMER speaks of the rudeness of the ordinary operation for nasal polypi, and the insufficiency of the ordinary methods of illumination of the anterior nares. Seeking better illumination in a case where he had left a part of the polypi by the ordinary operation, he tried the common eye-speculum, as a nasal dilator, and, being enabled by the aid of it to use the hook and scalpel and double curved scissors in removing what was left, modified it a little to suit the nose better, and recommends the use of it with reflected light. The instrument of Dr. Norton Folsom, which we described in this JOURNAL of April 3d of the present year, and which was first described in the *New York Medical Gazette,* is essentially the same as the instrument mentioned above.

FAUCES.

(1.) Deligation of left common carotid artery for Hæmorrhage from Fauces. Robert Bernard, M.D. [Phagedenic Ulceration.] *Lancet,* June 22, 1872.

LARYNGOSCOPY.

(1.) Abstract of Lectures on the Use of the Laryngoscope. By Morell Mackenzie, M.D. *British Medical Journal,* Aug. 31, 1872, et seq.

(2.) Laryngoscop mit portativ Lampe; auch für jegliche Lampenform passend. Tobold. *Berliner Klinische Wochenschrift,* Sept. 30, 1872.

(3.) Laryngoskopie an Thieren. Dr. Georg Schmidt, aus St. Petersburg. *Berliner Klinische Wochenschrift,* No. 3, 1873.

(4.) Entgegnung. Von Dr. Tobold. Betrachtungen über den Tobold 'schen nach dem "Dreilinsensystem" construirten Apparat. *Deutsches Archiv für Klinische Medicin,* 11 Bd. 2 Heft.

(3.) Dr. SCHMIDT is the first, as far as we are aware, to attempt laryngoscopy upon animals. His experiments were performed in the laboratory of Prof. Vierordt, at the latter's suggestion. The animal was appropriately secured by the means at his command in the laboratory, but narcotics were not employed. The cat proved herself to be the best animal for the experiments. She is so little disturbed by the whole proceeding, that if one exercises the necessary caution any desirable laryngoscopic examination can be made, and the effects of artificially established disturbances, e. g. of section of single nerves or muscles of the larynx, can be readily studied. Whilst reserving the full report of his observations for a subsequent communication, Dr. S. gives the laryngoscopic appearances after section of one recurrent. Section of the right recurrent in the upper part of its courses, under the lower edge of the cricoid cartilage, was made without the slightest hæmorrhage. The laryngoscopic examination, made immediately, gave the following appearances: the right vocal cord and right arytenoid cartilage remained immovable during respiration and phonation, in a position intermediate between that of ordinary respiration and phonation. The apex of the arytenoid was turned outward, and the paralyzed vocal cord formed a much more obtuse angle with the arytenoid than was formed on the other side. The right vocal cord appeared somewhat shorter than the left, the right arytenoid standing farther forward, it no longer being drawn backward by the action of the right posterior crico-arytenoid muscle, that muscle being paralyzed. On phonation, there was no change in the position of the paralyzed vocal cord, but the left crossed the median line and was approximated to the right, but not so closely as in normal phonation. The rima glottidis was accordingly very narrow, but not linear in form, being a little broader posteriorly. The arytenoid cartilages touched each other completely. The glottis-chink received a peculiar bent form, inasmuch as a bend inward was formed in the place of the vocal process of the arytenoid cartilage on the healthy side, and a similar bend outward on the affected side. On the production of very weak tones, and especially during purring, the vibrations of the healthy vocal cord could be seen most clearly when mucus adhered to it. The paralyzed cord, on account of its want of tension, was not in condition to be set into even passive vibration. When moderate difficulty in respiration was produced by means of a string about the neck, there were continual vibrations of the healthy vocal cord, whilst both inspiration and expiration were accompanied by hoarseness.

Schmidt remarks, in conclusion, that, after section of the recurrent, the voice was a little hoarse, and somewhat deeper and weaker. The hoarseness, however, had diminished on the following day. The animal showed no noticeable disturbances in her general condition.

[The appearances in the larynx, given above, correspond exactly with what has been repeatedly observed in man, when one recurrent has been supposed to be paralyzed, but the effect on the pitch of the voice seems to have been different, it being reported lower, whereas, in case of complete paralysis of one vocal cord in man, a falsetto voice is ordinarily produced.—K.]

GROWTHS IN THE LARYNX AND TRACHEA.

(1.) Vorträge über Laryngoskopie. Friedrich Fieber. IV. Ueber ein neues gefahrloses Verfahren zur Entfernung von Kehlkopfgeschwülsten. *Allgemeine Wiener Medicinische Zeitung*, Aug. 27, Sept. 10, et seq., 1872.

(2.) Drei Operationen von Kehlkopfpolypen. Sommerbrodt. *Wiener Medicinische Presse*, xiii. Jahrgang, No. 26, 27.

(3.) Zur Kenntniss des Epithelioms der Schilddrüse. *Virchow's Archiv*, 1872. Lv. 254.

(4.) Two Cases of Thyrotomy for the removal of Growths from the Larynx. Thornton. Abstract of a paper read at the Clinical Society of London. *Medical Times and Gazette*, March 8, 1872.

(5.) Sarcoma in the Trachea; sudden death from spasm of the glottis, after the injection of two or three drops of a solution of chloride of iron. Coën. *Wiener Medicinische Presse*, 52, 1872.

(1.) Fieber recommends electrolysis for the treatment of growths in the larynx, and, after describing the method of using it, gives six cases in which he employed it, with good immediate result; but as to the pathological nature of most of the swellings, no information is offered, except in one case, one of cancer, where, after temporary subsidence, it disappeared.

(4.) Mr. Thornton's first case of thyrotomy was that of a man aged 24, whose voice became slightly hoarse in December, 1868, and in the following month aphonic. Three years later, he came under Dr. Morell Mackenzie's care, his voice being almost suppressed and his breathing affected. With the laryngoscope, great thickening of the left ary-epiglottic fold and slight ulceration of the left ventricular band were seen. Lungs healthy. At the beginning of 1872, Dr. Mackenzie found the whole of the larynx covered with large vegetations. He was wearing a tracheal canula, put in six months previously in Halifax, on account of dyspnœa. Thyrotomy was performed by Mr. Thornton. Growths were found attached to all parts of the laryngeal mucous membrane; and were removed with cutting forceps, and nitrate of silver applied to their bases. The left ary-epiglottic fold was seen to be much thickened. The canula was not returned until the second day after the operation, when it had to be replaced on account of the difficulty of breathing. Microscopic examination showed the growths to be of an epitheliomatous character. Six weeks after the operation, dysphagia came on; and, two months later, examination showed displacement of the arytenoid cartilages, and it was evident that perichondritis had taken place. From this time, the difficulty in swallowing rapidly increased; for two months he was fed through an œsophageal bougie, and died at the end of the year. No post-mortem examination was allowed.

The second case was that of a boy two years and a half old, who was admitted to the Hospital for Diseases of the Throat, June 11, 1872, suffering from stridulous breathing and some lividity of the face. It was said that, from his birth, his cry had been weaker and harsher than that of other children, and that, after an attack of croup at two years of age, his voice was much harsher, and his breathing slightly stridulous. At the time of his admission, his respiration was so oppressed that he could not walk across the room, and it was difficult for him to obtain sleep. Dr. Semple discovered warty growths on both vocal cords. Five days after admission, on a sudden increase of dyspnœa, tracheotomy was performed by Mr. Thornton, and, two days later, at Dr. Semple's request, having removed the canula, he carried the incision up through the cricoid and thyroid cartilages. Warty growths were removed in the same manner as in the first case, from both vocal cords, and from the mucous membrane below the right vocal cord, and the parts brought together by silver sutures, the tracheal canula not being replaced. The child passed a good night, and slept with his head low. A month after operation, his voice was tried, and found harsh and feeble; his breathing was normal. He was soon after made an out-patient. On December 13th, his breathing became slightly stridulous, and, on January 10th, tracheotomy had to be performed a second time. Mr. Thornton remarked that there was no doubt that recurrence of the growths had taken place, although from the child being frightened from previous operative measures it was impossible to make a laryngoscopic examination. He also remarked upon the difficulty of effecting complete removal by thyrotomy. The author observed that he should not recommend the operation in a case like the first, which was undoubtedly one of cancer. In this instance, it was undertaken on account of the aphonia making it impossible for the patient to gain his livelihood.

In speaking of the second, Mr. Thornton thought the operation more justifiable, the tender age of the patient having rendered laryngoscopic treatment impossible.

(5.) Dr. Coen, in a letter to the editor of the *Wiener Medicinische Presse*, gives the facts in regard to a most unfortunate case. A woman, twenty-three years of age, came to the Polyclinic in Vienna to be treated for excessive dyspnœa, which had been increasing for three years. Laryngoscopic examination showed a tumor, which was situated on the right posterior wall of the trachea, in the neighborhood of the cricoid cartilage, of hard consistence, and not movable by respiration. The diagnosis of a sarcoma of the trachea was made, and Dr. Coën proposed to remove it in the same way as Schmidt had done in a similar case, i. e., by the injection of a solution of chloride of iron into the tumor by a syringe constructed for the purpose. After several weeks' exercise of the patient, Dr. Coën one day, when she was breathing in an exceptionally quiet manner, and had urged him to operate, "injected two or three drops of chloride of iron." Immediately, spasm of the glottis ensued, and in a few moments the patient died. Dr. Winiwarter was called to perform tracheotomy, which naturally was done too late.

Under Dr. Coën's letter, is a note from the editor, Dr. Schnitzler, in which he says that the legal autopsy made by Rokitansky confirmed the diagnosis of "sarcoma of the trachea"; that furthermore, the autopsy, and the facts stated above by Dr. Coën, most of which he personally could verify, showed that the operation was done according to all rules of the art, although not only the neoplasm, but also the surrounding mucous membrane of the larynx and trachea were hit by the solution of the chloride of iron; that evidently an unexpected irritation of the injected fluid had produced a severe spasm, which, in conjunction with the tumor below the glottis, caused the sad end.

[We do not know that legally every practitioner in Austria has a right to perform surgical operations, but it seems as if any one, if not a physician even, would be justified in such a case in plunging a knife into the trachea. It seems to us as if the patient's life was lost by sending out for a surgeon to do tracheotomy.]

Paralysis.

(1.) Lähmung beider Accessorii Willisii. Seeligmüller. *Archiv für Psychiatrie*, III., 2. *(Berliner Klinische Wochenschrift*, Oct. 14, 1872.)

(2.) Stimmbandlämung. Dr. H. Bose. *Archiv für Klinische Chirurgie*, 1872, xiii. Bd., 2 Heft. *(Vierteljahrschrift für die Praktische Heilkunde*, xxix. Jahrgang, 1872, Bd. 3.)

(3.) Laryngoscopic Observations on a Cat, after Section of the Right Recurrent Nerve; see (3) under "Laryngoscopy" in this report.

(4.) Laryngeale Paralyse nach Pocken. Dr. Breganze. (Mailand.) (*Gazetta Med. Ital.*, 16 November, 1872) (*Allgemeine Medicinische Central-Zeitung*, 7 December, 1872.)

(5.) Heilung einer hysterischen Aphonie durch einmalige Electrizirung. Petrilli. (*Il Morgagni. L'Ippocratico*, No. 21, 1872.) (*Allgemeine Medicinische Central-Zeitung*, Dec. 14, 1872.)

(6.) Ueber die Lähmung der Glottiserweiterer. Dr. Franz Riegel. Würzburg. (*Berliner Klinische Wochenschrift*, Feb. 17, 1873.)

(1.) Seeligmueller describes, as one of paralysis of both spinal accessory nerves, the case of a girl, twenty-four years of age, who, years before, had begun to have difficulty in swallowing, and who presented symptoms of paralysis of the soft palate and larynx; there was also increased frequency of the pulse, paralysis and considerable atrophy of both sterno-cleido-mastoidei and trapezii muscles. There was also atrophy and a weakness, resembling paralysis, in the upper extremities, especially in the left. This pathological condition corresponds to the anatomical result which Burchard has obtained with reference to the course of the fibres of the inner branch of the accessory after its union with the vagus, viz., that the N. pharyngeus contains, almost exclusively, the N. laryng. sup. few, and the N. laryng. inf. and the cardiac branch exclusively, fibres from the accessory. The disease, in this case of Seeligmüller, seems to have commenced in the region of the inner branches of the accessory, and to have extended slowly downward, affecting, finally, the motor nerves of the arms.

(2.) Bose divides paralyses of the vocal cords into three principal groups. 1. Paralysis of the recurrent laryngeal nerve. 2. Paralysis of the glottis-openers. 3. Paralysis of the glottis-closers. He considers especially the last group. Hysteria and taking cold are the principal causes. After taking cold, either the paralysis is the only consequence, or it occurs at the same time with a catarrhal inflammation, in which case the laryngoscope shows that the paralysis is not dependent on the intensity of the inflammation. The two affections stand only so far in relation, as that they owe their origin to the same cause. In complete paralysis of the glottis-closers, the vocal cords remain immovable in the respiratory position. In incomplete paralysis, there is a slight convulsive movement of the cords without approximation; or they separate immediately after approximation; or the closure is incomplete, so that a triangular space remains. The lowest grade of partial paralysis consists in a certain sluggishness of movement.

The consequence of this form of paralysis is usually complete aphonia, so that the patients can only speak in a whisper, as with paralysis of the glottis-closers paralysis of the tensors of the cords is usually combined. When this is not the case, the voice is more or less hoarse, but only fails entirely in very high and falsetto notes. In other cases the regularity of the vibrations is hardly interfered with, the clearness of the tone is almost normal, and the patients complain only that speaking requires unusual exertion. In paralysis of the tensors alone, the cords are approximated, but do not vibrate, and the patients are absolutely aphonic. Bose presumes that, in this case, there is paralysis of the crico-thyroid muscles, in support of which supposition observations on patients and the successful application of electricity in the region of the superior laryngeal nerve seem to speak; yet he was not successful in confirming this view by experiment.

He believes that these cases must be looked upon as a kind of partial paralysis, in which the patients complain of having lost the power of producing a certain number of high notes, and in which, on examination, nothing abnormal is seen by means of the laryngoscope, and in which the full compass of the voice is restored by the application of electricity.

The lowest grade of partial paralysis, according to Bose, corresponds to the condition which Gerhardt calls atony; the movements are accomplished, but not with their normal quickness, and often by jerks; in speaking, now and then a tone is heard; most words, however, are lost, yet single notes by themselves can be sung aloud. Bose criticizes the forms of paralysis of single muscles described by Türck, which he does not think to be sufficiently well grounded, and proceeds to speak of the different character of the cough in respiratory and phonic paralysis. He considers that an independent muscular system exists for closing the ventricular bands, and that this alone, without the aid of the muscles of the vocal cords, can produce a complete closure of the glottis; that in phonic paralysis, only the muscles of the glottis are paralyzed, but in respiratory paralysis, the muscles of the ventricular band also. On such a theory the peculiarity can perhaps be explained that in phonic paralysis, with complete loss of voice, the cough still has tone.

The results of Bose's examinations and observations are given, at the end, as follows:—Those paralyses of the vocal cords, which are designated as paralyses of the glottis-closers, are divided into two chief forms, the one of which is characterized by this, that on attempt at phonation the glottis remains open; the other by a want of vibration of the vocal cords. Both forms are usually combined, and may occur in varying intensity, and the lowest grade of partial paralysis corresponds to the atony of Gerhardt. Besides the muscles which move the vocal cords, there is in the larynx a second muscular system, which serves to close the ventricular bands. Paralysis of the vocal cords may be accompanied by a paralysis of the ventricular bands, and it is the rule that, in paralysis of the recurrent nerve, the ventricular band is also paralyzed; if, on the contrary, there is paralysis of the glottis-closer, it usually exists by itself, and is only exceptionally accompanied by a paralysis of the ventricular band. When paralysis of the vocal cords and ventricular bands occur together, the explosive sound is wanting in the cough. When, on the contrary, the vocal cords are paralyzed, but the ventricular bands are not, the cough may even be accompanied by a loud tone. We sometimes see, in such cases, on attempted phonation, instead of the closure of the vocal cords which are paralyzed, the closure of the ventricular bands which are not paralyzed. The paralysis of the ventricular band does not occur exclusively in connection with paralysis of the vocal cords, but the case may also occur, where only the ventricular bands are paralyzed, and the vocal cords possess their normal movability; the patient suffers then from the so-called barking, hysterical cough.

(4.) Dr. Breganze reports a case in which loss of the power both of articulation and phonation came on after acute cerebral symptoms in smallpox. Recovery ensued under a few applications of electricity, which Dr. Breganze considers as rather a coincidence than cause and effect.

(6.) An abstract was given, in our last report, of a paper published by Dr. Riegel in the *Berliner Klinische Wochenschrift* for May 13th and 20th, 1872, on paralysis of both posterior crico-arytenoid muscles, including the report of a case of this affection in a child of six years, occurring in his own practice, in which tracheotomy was necessary. In the present article, he gives the continuation of this case till death, and then gives an account of the autopsy. The immediate cause of death was an attack of measles. At the autopsy, there was found bronchiectasis of both lungs, especially of the right; both recurrent nerves were imbedded in firm, contracted connective tissue, the right between the apex of the lung and the subclavian artery, the left on the posterior surface of the arch of the aorta. Everywhere throughout the course of both nerves were found atrophied, degenerated nerve fibres, and, at the same time, always some which were perfectly intact. Both posterior crico-arytenoid muscles were found to be atrophied, but the most careful examination of the other muscles of the larynx failed to show the least change. Thus the diagnosis made by Riegel was exactly confirmed. Riegel remarks that this is the first case in which a simple paralysis of the muscles of the larynx has necessitated tracheotomy, but in Mackenzie's case,* and in both of the cases reported by the author, this operation was performed.†

BRONCHOCELE.

(1.) Beitrag zur Heilung des Kropfs, von Dr. Francesco Parona. (Successful treatment by the injection of the mineral water of Salsomaggiore.) *Deutsche Klinik*, 1872, No. 41, u. 42, *Virchow's Archiv*, 1872.

(2.) Observations on Goitre. By Geo. H. Savage, M.D. *London Lancet*, July 20, 1872.

(3.) Heilung eines Cysten-Knotenkropfes durch Erregung einer chronischen Entzündung mit Eiterung in der Cyste. Dr. Bauer. *Wiener Medicinische Presse*, Sept. 29, 1872.

(4.) Weitere Beiträge zur Pathologie und Elektrotherapie der Basedow'schen Krankheit. Chvostek. *Wiener Medicinische Presse*, Nos. 23, 27, 32, 39, &c., xiii. Jahrgang, 1872.

(5.) Bronchocele giving rise to dyspnœa; tracheotomy; subsequent death from phthisis; trachea compressed by the enlarged thyroid body. Jessop. *British Medical Journal*, Nov. 2, 1872.

(6.) Beiträge zur Heilung des Parenchym- und Cystenkropfes. Von Dr. Karl Störk. *Wiener Medicinische Wochenschrift*, Jan. 25, Feb. 1.

(2.) Dr. SAVAGE gives statistics in reference to the prevalence of goitre in the village of Nent Head, Cumberland. He left forms at the houses, and obtained returns from 829 persons; of these 181 confessed to goitre, of whom 58 were men, and 123 were women. Of 234 school children carefully examined by Dr. Savage himself, 168 were found to be goitrous.

LARYNGEAL ULCERATION.

(1.) Das tuberkulöse Geschwür im Kehlkopfe. Wallberg. *Wiener Medicinische Jahrbuch*, 1872, iii. Heft.

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* Hoarseness, Loss of Voice, and Stridulous Breathing, &c. London, 1868, p. 34.

† This JOURNAL, Feb. 25th and Sept. 30th, 1869.

(2.) A Case of Phthisis Pulmonalis, accompanied by Ulceration of the Larynx and Plastic Exudation into the Trachea and Bronchi. Philipson. June 22, 1872.

Œsophagus.

(1.) On Syphilitic Constriction of the Œsophagus and Pharynx. James F. West, F.R.C.S. *Lancet*, Aug. 31, 1872.

Injuries.

(1.) Fracture of the Trachea. *(British Medical Journal,* Dec. 28th, 1872.) A middle-aged woman fell from a broken chair, and struck the trachea against an upright spindle; there was expectoration of blood and extreme general emphysema. Recovery in about ten days.

Physiology.

Der Musculus Cricothyreoideus. Dr. Jelenffy, in Pesth. *Archiv für gesammte Physiologie.* Bd. 7, Heft I.

(To be concluded)

Obstinate Intercostal Neuralgia of three Years' Standing, following a Severe Attack of Herpes Zoster—Cured by Hypodermic Injections. Reported by Mr. J. C. Cameron.—A. F., aged 70, married, was admitted into the Montreal General Hospital on the 26th September, 1872, suffering from severe paroxysmal pain in the left side. She states that *three years ago* last March she was suddenly seized with severe shooting pains in the left side, followed, in two or three days, by the appearance of many small blisters, looking, as she says, "as if it had been *burnt.*" The part thus affected subsequently remained ulcerated and sore for a length of time, but finally healed, but the pain which had accompanied it throughout remained, and, indeed, she has never been entirely free from pain in the part since the first commencement of the attack, and latterly this pain has been becoming more severe. The pain is now evidently neuralgic, occurring in violent paroxysms, and following apparently the course of the seventh and eighth intercostal nerves. It is darting and stabbing in its character, and the usual anterior, posterior, and mid-lateral *tender points* are extremely well marked. There are to be seen, surrounding the left half of the chest, just below the mammary gland, a series of cicatricial patches, varying in size from half the palm of one's hand, to that of a quarter of a dollar, white and glistening in appearance, and which at first were naturally taken for the scar of a burn, until the previous history just related was known, and it was found that the cicatrices extended exactly from the sternum to the vertebræ round one side of the body.

Ordered cod-liver oil, and to have a hypodermic injection of one quarter of a grain of muriate of morphia every night.

It is unnecessary to give a detailed report of this case. Relief to the pain was immediate; the tenderness of the "points" soon became much less, and she slept soundly at last without the morphia. Discharged cured, for the time at any rate, on the 28th October, 1872, after just one month's treatment.

This case is an example of the extreme severity of some of the neuralgias, which are found to be accompanied by herpes zoster; also, of the extent to which the latter may lead to ulcerative destruction of the skin, and the obstinacy and persistence of the subsequent painful affection.—*Canada Medical and Surgical Journal.*

Bibliographical Notices.

Defence of Insanity in Criminal Cases. Argument of HENRY L. CLINTON, of New York. Delivered April 15th, 1873, before the Judiciary Committee of the Senate, in favor of a Bill drafted by him which had passed the Assembly. New York. 1873. Pp. 41.

THIS bill provides that, if the jury acquit in capital cases on the ground of insanity, the person acquitted "shall be confined in one of the State Lunatic Asylums, or in the State Asylum for Insane Criminals at Auburn, for a period not less than fifteen years, and until it shall be proved, in the manner provided by law, that the defendant has been restored to sanity." To prevent injustice in individual cases, the third section gives the governor power to discharge any person confined under this act, "if in his opinion justice shall require it."

It would be a waste of time to analyze the long and able special pleading of this writer. Nobody expects judicial fairness, scientific accuracy, or even respect for the honest opinions of others, from a lawyer advocating a bill. There is, of course, abuse of experts, at whose head he puts Dr. Ray, as having carried the modern "doctrine of insanity to ridiculous and absurd lengths"; there is an ungrateful rejection of impulsive, emotional, moral, and all partial insanities, as of too suspicious character to be of much account, and a renewed assertion of the complete availability and sufficiency of the legal tests of "delusion" and "knowledge of right and wrong." He claims, further, that if partial insanity must be admitted in defence of crime, it must be shown by the evidence :—

1st. That if the defendant labored under a delusion, the act in question was the direct result—the immediate offspring of that delusion or partial insanity.

That is to say (it being unnecessary, as he elsewhere affirms, to prove *any* motive), no delusion, however stupendous, shall afford any excuse for crime, unless its subtle relations to that crime can be plainly shown!

2d. That the facts and circumstances which the defendant believed to exist (but which were untrue) would, if true, in law, have justified the defendant in the commission of the act for which he is on trial.

That is to say, if a mother has a delusion that her only child is dying of cold and starvation, and kills him, she is guilty of murder, because the delusion, if true, could, in law, be no justification for the act!

3d. That, with reference to such act, the defendant did not know right from wrong.

When? Just before or just after? Wrong for another or wrong for him? Human or moral, or only unlawful? Wrong in the abstract, or justified by the circumstances? These questions are, I suppose, too subtle to enter into a legal test, and yet the whole question of real responsibility rests on them.

Instead of quoting Dr. Ray, who, of course, can know nothing of the workings of the insane mind, as seen from the standpoint of the criminal law, let us refer to certain judicial opinions, as set forth in State *vs.* Jones, a pamphlet published at Andover, New Hampshire, August, 1872.

The first point in this report of interest to the medical reader is the recognition by the court of those forms of insanity which alienists have often insisted on, but which the law, reflecting popular rather than scientific opinion, has been slow to recognize. The possibility of the special or predominating disorder of each of the grand divisions of mind, the intellect, the emotions and the will, is distinctly admitted. Partial insanity, insanity without delusion, moral or emotional insanity, and irresistible insane impulse, are all admitted by inference, if not in so many terms.

The next point is the authoritative opinion of the court, sustained by a careful review of English and American precedents from 1723 to the present time, and supported by the able argument of the Attorney General, and a previous decision of Judge Doe, *that there is no well defined and uniform legal test of insanity.*

The chief interest in this case, however, centres in the ingenious method by which Judge Doe, following Judge Perley, avoids the necessity of eliciting a rule of law for the guidance of the jury, where rule there is none, by transferring the whole question of insanity from the domain of law to that of fact, where it really belongs. The expert, in examining a case of suspected insanity, relies on no test, medical or legal. The disease is to him a matter of observed fact. If he applies legal tests, it is only because he expects to find them applied by the court. Models of thought, expression of feeling, and the patient's acts—as related to underlying physical conditions—are the *facts* upon which the physician bases his opinion, and in the absence of any test, medical or legal, it is surely better to let them go to the jury directly for what they are worth.

The opinions in State *vs.* Jones will, at least, establish this fact, that legal and judicial authorities disagree as radically and frequently as medical authorities, and that the writer of the argument for the New York bill has gone out of his way to abuse and cheapen medical experts and their opinions. As to his bill itself, he would probably find most medical experts substantially in favor of it. The confinement for a long period of an insane criminal in some suitable hospital would meet universal approval from medical men, and the power to discharge might very properly be vested in the governor, who would, on petition, order a careful investigation in each case, calling in, no doubt, that same kind of testimony which the author of this bill so much undervalues. T. W. F.

Wöhler's Outlines of Organic Chemistry. By Rudolph Fittig, Ph.D., Nat.Sc.D., Professor of Chemistry in the University of Tübingen. Translated from the Eighth German Edition, with additions, by Ira Remsen, M.D., Ph.D., Professor of Chemistry and Physics in Williams College, Mass. Philadelphia: Henry C. Lea. 1873. Pp. 530.

The fact that the original of this work is used extensively in Germany as a text-book on organic chemistry, and has rapidly passed through eight editions, attests its value. The introductory chapter upon the "constitution of chemical compounds" renders it especially valuable to the beginner, as well as the simplicity of the classification adopted, the hydrocarbons having been taken as the starting point in the consideration of all the other groups of substances. In the case of those substances whose exact constitution, or position among the classified compounds, is not as yet known, such as many of the vegetable alkaloids, a concise and yet sufficient description of their appearance and chemical properties is given.

Scarcely more than a mere allusion, however, is made to those substances, especially important in the study of physiological chemistry. For instance, the biliary constituents are disposed of in seven pages, the protein in eight, and the last chapter, on "Animal Chemistry," occupies but thirty pages, and yet treats, or pretends to treat, of the chemistry of the blood, chyle, lymph, saliva, gastric juice, bile, skin and its secretions, horny tissue, muscles, bones, tissues yielding gelatine, fat, mucus, transudates of serous membranes, eye, nervous system, egg, semen, milk, urine and excrements.

Aside from these three chapters, the subjects of which are much better left for special treatises on physiological chemistry, the book is admirably adapted to the object for which it is intended, namely, as a book "for reference in connection with laboratory work," an object favored by the conciseness and brevity of the descriptions, the author having been guided by this principle, mentioned in the preface of the seventh edition, namely, "of every homologous series, that compound which is most thoroughly investigated, and which may be considered as a type of the whole series (as, for instance, ethyl alcohol in the series of saturated, monatomic alcohols, and acetic acid in the fatty acid series), is, with its derivatives, considered very extensively; while, for the other numbers of the same series, only the physical properties of the more important ones are briefly stated, and their characteristic derivatives mentioned."

Dr. Remsen has conferred a great favor upon the scientific public in this country in giving to it this translation, which supplies fully the want of a text-book for the use of students in the laboratory and in connection with lectures on organic chemistry, and by his own additions in bringing the book up to the standpoint of the present time.

E. S. W.

Leitfaden bei der Mikroskopischen Untersuchung Thierischer Gewebe. Von Dr. Sigmund Exner.

A Guide to the Microscopical Examination of the Animal Tissues. By Dr. Sigmund Exner. Leipzig: W. Engelmann. 1873. Pp. 93.

This small volume will be of great service to those who are doing real work with the microscope. Unlike Frey's and Beale's works, it does not give even the faintest outlines of histology, but teaches merely how to work. It gives clear directions for hardening and cutting the tissues and for coloring and mounting the sections. The information concerning injections is very good for due attention it gives to many points of detail, which are apt to be neglected, but which are essential to success. The art of staining with two colors is making progress; there are directions for using aniline blue, chloride of palladium and picric acid in conjunction with carmine; also for treating the cornea with chloride of gold and nitrate of silver successively. The author speaks of the danger of deception from the curious accidental effects that silver occasionally produces. He considers this reagent so unreliable, that he would accept nothing which it shows which cannot be made visible by other means, and, later, he says that the same remarks apply to gold. We think that the latter metal is far more reliable than silver, but if the author errs, it is on the safe side. The arragement of the book is not quite as good as it might be, and there is one omission: the methods of studying and experimenting on the circulation in the living animal are entirely ignored. The work is the result of the training which special students receive in the best laboratories in Germany. Little time is wasted there on diatomes, test lines and complicated appliances; the study of structure is kept steadily in view. We should like to see this book translated into English, believing that it would be of great service in medical education. D.

BOOKS AND PAMPHLETS RECEIVED.

Civil Malpractice. A Report presented to the Military Tract Medical Society. By M. A. McClelland, M.D. Chicago: W. B. Keen, Cook & Co. 1873. Pp. 74. Price $2.00.

The Geology of the Stars. By Prof. O. Winchell. (Half Hour Recreations in Popular Science.) Boston: Estes & Lauriat. P. 31.

Conium in the Treatment of Insanity. By Daniel H. Kitchen, M.D. From the American Journal of Insanity for April, 1873. Pp. 24.

Medical Education; what it is and what it might be made. An Address before the Society of the Alumni of the Medical Department of the University of Pennsylvania, March 12th, 1873. By Alfred Stillé, M.D. Pp. 34.

Ovariotomy, By J. Marion Sims, M.D. Re-printed from the New York Medical Journal. New York. 1873. Pp. 85.

TREATMENT OE FISSURES OF THE NIPPLE.—In a paper by Dr. Créquey, fissures of the nipple are described as being of two kinds. First, those produced by the violent suction on the part of the child; here the epidermis is raised and abraded, as if by a cupping-glass. In this condition of the nipple, the child should be allowed to suckle only when the breast is charged with milk. Second, at other times, a little of the milk lodges in the minute cracks at the base of the nipple, where it comes in contact with the secretions of the body and rapidly decomposes, thus acting as an active irritant of the skin, and in some instances inducing very extensive inflammation. As a preventive of cracked nipples, originating in this manner, the breast should be bathed with warm water, wiped dry, and then anointed with the following ointment:—

℞. Tannin, 1 gramme;
Glycerine, 10 grammes.

This should be applied by means of a camel's hair brush, after which the nipple should be protected with charpie, or a soft linen cloth. In these cases, the nipple-shield may be employed to advantage.

If the breast be distended with milk, relief may be afforded by the application of a large, flax-seed poultice, taking the precaution to protect the nipple with a piece of soft leather.—*Gaz. des Hôp.*, 1873, p. 84.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, MAY 15, 1873.

THE opportunity offered by the prevailing epidemic of cerebro-spinal meningitis for original investigation concerning its etiology and epidemic character is not lost on the State Board of Health. The following notice intimates that a good use will be made of the facts which every day's medical observation in the cities and towns of the State is accumulating with regard to this disease; and we gladly promulgate the subjoined request to medical men, in the anticipation that the next annual report of the Board will shed much light on a subject of such importance.

To Correspondents of the State Board of Health in the Cities and Towns of Massachusetts.

It is proposed to make as complete an investigation as possible of the epidemic of cerebro-spinal meningitis now prevailing, for publication in the next annual report.

For this purpose the correspondents of the Board are requested to collect all facts bearing upon the subject, and especially those relating even remotely to the supposed origin of the disease, in anticipation of a circular which they will receive at a later period.

This special inquiry will be conducted by a physician of Boston, who is well known to the profession in connection with the previous history of the disease in the United States.

In behalf the State Board of Health of Massachusetts,

GEORGE DERBY, M.D., *Secretary.*

Boston, May 5, 1878.

A NEW METHOD OF PRODUCING LOCAL ANÆSTHESIA.—The interest that has been recently manifested in the profession on the subject of anæsthetics, induces us to take an early opportunity of directing our readers to an important paper, by A. Horvath, of Kieff, published in the *Centralblatt für die Medicinischen Wissenschaften,* proposing a new method of producing local anæsthesia. It is a well-known fact, that if the hand be immersed for a short time in ice-water, an intolerable pain is caused, and the hand has to be withdrawn. In the course of a series of experiments, made in reducing the temperature of frogs by means of cold alcohol, Dr. Horvath observed that no such pain was produced when the hand was immersed in cold alcohol, not even when the temperature of the alcohol was as low as –5° C. Pursuing the experiment still further, glycerine was found to possess a property similar in this respect to alcohol. Ether, on the other hand, caused pain, the same as ice-water, while the pain produced by cold quicksilver was more acute, causing the speedy withdrawal of the finger when plunged into this liquid at a temperature of –3°. It was next ascertained that, when the finger was held for quite a long time in alcohol having a temperature of -5^0 C., no pain whatever was experienced, and what was a still more remarkable phenomenon, although the faintest touch was distinctly perceived in this finger, yet no pain whatever was experienced from sharp pricks, which in other fingers were sufficient to cause considerable pain. This experiment seemed to show that the application of cold alcohol has the effect of depriving the part of the special sensibility to pain, without, however, impairing the delicacy of the general tactile sensation, which, as is well known, resides in the superficial integument. This apparent possibility of the artificial separation of these two nervous functions, viz., the tactile sensation, and the sensation of pain, and the temporary suspension of the latter, seemed important in a physiological point of view, and also of no small practical utility in allaying certain forms of local pain, more especially that caused by burns, and surgical operations. With regard to burns, Dr. Horvath soon had an opportunity of testing the value of this application on his own person, as well as upon others, and with the most satisfactory results. Not only was all pain instantly allayed, directly the part was immersed in alcohol, but it was found that the wound very speedily began to assume a more healthy appearance, the surrounding redness rapidly failing. The process of healing seemed also to be accelerated. If that theory is a correct one which ascribes the frequent fatal termination of burns to the result of the constitutional shock induced by the severity of the pain, in that case the application of cold alcohol, in that it affords the patient an immediate relief from his sufferings, will prove a powerful agent in such accidents in saving life. In like manner, this same application may be found valuable, it is thought, in cases of traumatic tetanus. The method of producing local anæsthesia by the aid of ice, ether and rhigolene has been perfectly understood for many years. These agents have never been extensively employed, however, inasmuch as it has been found by experience that the process of freezing the part is often productive of quite as serious pain as would have been experienced from the operation without the administration of any anæsthetic. The ether spray is found to be a source of embarrassment to the operator, for, if not carefully directed, it is liable to take effect upon his own fingers, bringing on a sudden numbness, which is more surprising than gratifying. It can, moreover, be applied to only a limited extent of surface at a time.

The extreme simplicity of this new anæsthetic, the ease with which it can be applied to any part of the body where pain is experienced, or when it is desired to make an incision—all these circumstances tend to make it highly probable that its employment will ultimately become general, thereby doing away, in a great measure, with the disagreeable and dangerous effects of ether and chloroform.

Resection of the Hip-joint.—The second volume of a work on this subject, by Dr. E. v. Wahl, has just been issued from the press, an abstract of which appears in the *Deutsche Klinik* (No. 45). The operation for the removal of the head of the femur is one of comparatively recent adoption, having been first successfully performed by White in the year 1818. As in the case of ovariotomy, and other of the more modern operations, the rate of mortality is found to decrease in direct proportion to the frequency with which the operation is resorted to, so that we are not yet in a position to predict how large a percentage of favorable results may eventually be hoped for.

Dr. Heyfelder, in the year 1858, collated fifty-six cases of resection of the hip-joint, the result of which was as follows :—recovered twenty-six, fatal twenty-three. In seven cases, the result was not ascertained.

Price collected fifty-nine cases, of which thirty-three recovered, twenty-five proved fatal—fourteen succumbing immediately after the operation, and the remaining eleven within a period varying from three months to two years. The result of one was not learned, so that the rate of mortality was twenty-three per cent.

Pirrie collected seventy cases, of which twenty-five were unsuccessful, the percentage of fatal results being, therefore, thirty-five.

Sayre has reported the details of thirty operations, of which ten were followed by death. At a later date (1866), the same writer published one hundred and nine cases in which the operation was performed on account of chronic disease of the joint; and of these, thirty-six proved fatal, the rate of mortality in each series being one-third.

Hodges, in a monograph on this subject, gives the details of one hundred and eleven cases, of which forty-six resulted favorably, fifty-three proved fatal, while the result in two cases was unfavorable, that is, the patient recovered with a useless limb.

Butcher reported fifty-eight cases in the year 1866, gathered from the London hospitals, of which nine resulted fatally.

Good makes a comparative review of twenty cases of exarticulation, and thirteen of resection, of the hip-joint, performed on account of gun-shot injuries. Of the former, fifteen were fatal; of the latter, seven. In 1869, the same author compared the results of the operation in England and France, when performed on account of caries, and found that, in England, out of thirty-two cases twenty-one recovered and eleven died; while in France, out of fourteen cases, two recovered and twelve died. Out of eleven cases reported in Philadelphia, there were four deaths.

Eulenberg has made a collection of fifty-six new cases, of which twenty-two recovered, three were not relieved, twenty-four died, while in the remaining seven cases the result was not known. Of these fatal cases, seven per cent. died within a month of the operation, and six per cent. within the first three days.

From the above brief review of the conclusions of different eminent surgeons, it will be seen that the statistics collected will bear a still further sifting; and it will be practically found that the two other factors furnish important data in enabling us to form a correct prognosis. These are: 1, the origin of the disease, whether traumatic or the result of caries; 2, the age of the patient. In reference to these points, the contribution of Dr. v. Wahl possesses special interest, as the author keeps constantly in mind the relation between the exact nature of the disease and the prognosis. He dwells, moreover, upon the fact that a resection of the hip-joint has a decided tendency to shorten the duration of suffering, which is often protracted to so long a period as to wear out the sufferer, so that the operation of resection is to be regarded as a method of securing *euthanasia*. The eight cases reported by Dr. v. Wahl are divided into three categories:—

I. Those performed at the most favorable time ; that is, at an early period of the disease.

II. Those postponed on account of uncertainty in the diagnosis, or misplaced confidence in some other palliative mode of treatment.

III. Operations performed to render approaching death painless.

I.

1. Boy, æt. 8; recovery in two and one-half months, with free motion.

2. Boy, æt. 4 ; recovery in eight months, with subsequent synostis.

3. Boy, æt. 2; death from tubercular meningitis, after sixty-six days. Operation performed seasonably.

II.

1. Girl, æt. 5; relieved at the end of six months, with formation of sinus, the seat of a purulent discharge.

2. Boy, æt. 6. At the end of a year, still confined to bed. Prognosis unfavorable.

3. Boy, æt. 4. Death from serous effusion into the brain. Purulent degeneration of the psoas muscle.

III.

1. Boy, æt. 7½. Death from tubercular meningitis at the end of fifty-three days. Purulent infiltration of the retro-perineal lymphatic gland.

2. Girl, æt. 7. Operation followed by relief, but death took place from exhaustion, at the end of thirty-six days.

As the result, then, of these eight cases, two were cured, two were relieved, and four died. Of the latter, death in one instance was not directly referable to the disease of the joint.

At the post-mortem examinations, it was demonstrated that, in some instances, the disease may be so extensive that no cure could reasonably be expected from any operation, however thorough, a remark which is especially applicable to those cases complicated with purulent degeneration of the psoas muscle.

As a rule, it is exceedingly difficult to determine the appropriate time for the performance of the operation for resection. The existence of abscesses and fistulous openings affords no proof of advanced caries of the joint, for even when these symptoms are present, recovery may take place without operative interference, more particularly when resort is had to permanent extension.

The only absolute indication of caries of the joint is the presence of crepitus; but where its existence is clearly made out, then the question arises whether or not the time for operation has been allowed to slip by. In case of *arthritis fungosa*, the crepitus may be completely concealed.

For this and similar reasons, the author advises seasonable operation, even at the risk of finding but slight pathological changes around the joint. The operation has not, on the whole, been attended by very brilliant results, so that it has already become unpopular with quite a number of surgeons, and it is, therefore, hardly to be expected that this advice with regard to early interference will be generally adopted.

The operation has been done five times at the Massachusetts General Hospital. The first time, Feb. 21, 1852—the operator, Dr. Bigelow—being the first time the operation was ever done in this country ; the patient, a minor, æt. 11; the duration of disease uncertain, at least a year. Abscesses had formed around the joint; there was dislocation of the head of the femur, and the bone was found extensively diseased. The patient died March 3, 1852.

II. A minor, age not given. Operator, Dr. Parkman. Duration of disease, six months. Abscesses; dislocation of head of femur. Operation, Oct. 13, 1853; death, Sept. 8, 1854.

III. Minor, aged 9. Duration of disease, three years. Sinuses around the joint; dislocation of head of femur. Operator, Dr. Gay. Operation, Oct. 31, 1857; death, Nov. 15, 1857.

IV. The patient aged 25. Duration of disease, 2 years. Sinuses around the joint. Operator, Dr. Hodges. Operation, Aug. 30, 1869; the acetabulum found diseased. Nov. 14, 1869, the patient discharged, well.

V. The patient aged 27. Disease of one year's duration. Abscesses around the joint. Operated on by Dr. Cabot, Feb. 28, 1872; death, June 18, 1872.

In all these cases the disease was far advanced; in none was the origin traumatic, and none of the operations could be said to have been done at the most favorable time.

The fact that the only successful case was that of an adult, is noticeable.

During the five years ending 1869, excision of the head of the femur for coxalgia was performed eleven times at the Boston City Hospital. Two of the cases were adults, nine were children. Seven recovered, four died. Both the adults died. The ratio of mortality was 36 per cent.; excluding the adult cases, the mortality among the children was 22 per cent. In all the cases, the head of the femur was distinctly carious and the cartilage eroded; but the operation was not from choice delayed as a last resort till the final stage of the disease.

As regards the results in the above cases, they are tabulated as follows:—

None died from the direct effects of the operation.
Two died after operation, of tuberculosis.
One had a useless limb, like chronic hip disease.
Three had useful limbs, but with sinuses.
One had a good limb when he was lost sight of.
Two recovered completely.
Two adults died, one of Bright's disease and one from exhaustion.

In summing up the experience of the surgeons at the Boston City Hospital during the five years alluded to,* Dr. Cheever concludes as follows:—

"1. Hip-disease is far from always fatal.

"2. It is amenable to palliative treatment, if begun early.

"3. Excision, then, among the better classes of patients, should be practised sparingly and as a last resort. But—

"4. Among hospital cases, a different rule applies; and excision should be resorted to as soon as caries is certain, in order to give the patient a quicker recovery and a surer drainage when he leaves the hospital. And—

"5. The operation itself, as an operation, will be more successful if done early in the disease.

"In the child, excision of the hip is not a dangerous operation, ... and the patient is better the day after the operation than he was the day before it."

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* Med. and Surg. Reports, First Ser., 1869, Boston City Hospital.

UNIVERSITY OARS.—Under this heading, the *Medical Times and Gazette,* March 29, 1873, contains a notice of a book recently written by Dr. J. E. Morgan, of Manchester. In his work, the author has instituted a critical inquiry into the after-health of the men who rowed in the Oxford and Cambridge boat-races from the year 1829 to 1869.

For some time it has been questioned, particularly since Mr. Skey called attention to the matter, whether, interesting and exciting as the contest is, it does not endanger the health of the rowers to an unwarrantable extent. "Hypertrophied hearts, emphysematous lungs, and exhausted nervous systems are too great a price to pay, even for the best and purest of our public sports.

"But is the price to be paid? Dr. Morgan has pretty conclusively answered it in the negative. He has, with great care and trouble, obtained letters from 251 out of the 255 oarsmen, who, having rowed in the University races during the period over which his inquiry extended, were alive in 1869. . . . With regard to the effect of rowing on the expectation of life, he thus sums up his results :—'However severe be the standard of longevity which we require, my tables are still favorable to the rowers. Thus, for example, if, instead of adopting Dr. Farr's calculations, we take the tables of some of those insurance offices which profess to accept none but select lives, we still find the oarsmen living beyond those limits; and when, in addition to requiring this high rate of years, we become still more exacting, on the ground that nearly half of the rowers are clergymen (whose lives are somewhat better than those of less favored mortals), the grand results (in commercial parlance) still show a balance on the right side.' Of the 294 men who rowed in the twenty-six races which Dr. Morgan describes, thirty-nine are dead. Eleven of them died of fevers, six died from accidental causes, seven from consumption, two from other chest affections, three from heart disease, and the remaining ten from various other diseases. The lungs and heart are the organs which we all suppose suffer most in these aquatic struggles. Now, what is the fact? Of the total deaths among the oarsmen, 17 per cent. were due to consumption, and 5 per cent. to the remaining varieties of pulmonary affections. But the Registrar-General's reports show that over a period of seven years 28·9 per cent. of the deaths of males between the ages of 40 to 60 will be due to consumption, and 11·2 per cent. to other forms of chest disease. In the army, death from this class of affections is higher than amongst the civic population, and decidedly higher than amongst university oars. There were only three deaths from heart disease, almost too small a number to furnish grounds for deduction, but at least there is but little appreciable difference in the mortality observed amongst university oars and that which prevails amongst other classes of men at a corresponding period of life."

The Editorial further states :—"We have no hesitation in expressing our belief that for a large proportion of young Englishmen, rowing in college and university races is a capital training; it relieves the body of superfluous nervous energy, and braces both body and mind for the harder struggles of life. In proof of the good health which in a vast number of instances the oars have enjoyed, we might quote many a letter from Dr. Morgan's pages. The Bishop of Perth, a rower in the first race, now 63 years of age, writes that he can still skate and play cricket, and row as stroke in a four-oar eight miles on an occasion.

Bishop McDougal writes:—'I rowed in the Oxford and Cambridge Match of 1842, as bow. I believe that in my own case rowing has strengthened me to go through hard and trying work on the Equator for twenty years, and to be, as I am, the only survivor of all my contemporaries in it; but none of them were rowing men. I can pull a stout oar yet on our quiet Ouse, and hope, please God, to be able to do so for years to come.'"

The real question is not what becomes of the few picked men who row in the University crews, but what becomes of the many who try to get into them? The statistics in the above papers are taken from the successful class, not from the failures. Eds.

Medical Miscellany.

The first number of the *Obstetrical Journal of Great Britain and Ireland,* with an American Supplement, has just appeared. It is appropriately dedicated to Harvey, and bids fair to be a most excellent journal. The supplement is ably edited by Dr. W. F. Jenks, of Philadelphia.

The following gentlemen have been elected Councillors of the Middlesex South District Medical Society:—

Drs. W. W. Wellington, J. C. Dorr, A. P. Hooker, Z. B. Adams, A. C. Webber, S. H. Hurd, H. Holmes, A. Hosmer, T. P. Robinson, G. F. Jelly, J. M. Bemis, R. L. Hodgdon, S. G. Burnap, J. L. Sullivan, W. B. Morris, H. C. Chapin, G. J. Townsend.

Material for Hypodermic Injections.—The aqueous solutions of the alkaloids are soon impaired by the growth of minute fungi on the surface. This is prevented by the addition of 20 per cent. of glycerin. Sulphuric acid is thought to be better than hydrochloric to facilitate the solution of the salts.—*Chicago Medical Examiner.*

Imported Trichinosis.—Dr. G. W. Focke, according to the *Berliner Klinische Wochenschrift* of April 21st, reports that a series of cases of trichinosis following the use of pork imported from North America, has been recently observed in Bremen. Twelve persons were infected by a gammon of bacon bought at auction; the younger, from ten to twelve years old, were least affected, while the adults suffered more severely. In course of time, more cases of disease, traceable to the use of other hams, were observed; and, at the time when the report was made, the number of persons suffering from trichinosis exceeded twenty. Living trichinæ were found in the specimens of meat examined. The process of smoking only kills the trichinæ in the more superficial parts of the meat, leaving their capsules easily recognizable; while in the interior the meat is almost raw and the trichinæ intact. —*British Medical Journal.*

The *Missouri Dental Journal* is of "the opinion that the surgery in all places out of large cities will some day fall into the hands of dental practitioners—the only persons in small towns who are fitted, so far as the use of instruments are concerned, to perform surgical operations. Let the dentist only qualify himself, by attention to surgery, and these cases will of necessity fall into his hands. The common practising physician can never have practice enough in surgery to accustom himself to the use of instruments, and must ever remain as he now is, exceedingly awkward in performing all delicate operations."

Knowledge of medicine is more important than mere operative skill.

THE American Public Health Association closed its session, at Cincinnati, on May 3d. It will meet again on the second Wednesday in September next, at Providence, R.I.

A JUMP OFF LONDON BRIDGE.—The *Guy's Hospital Gazette* mentions that in No. 26, Clinical Ward, there is a case of pleurisy produced by a jump off London Bridge. The patient states that during the whole time of her fall and immersion she did not lose her senses, and, on admission, she inquired into what hospital she had been brought. She was in the water ten minutes.—*British Medical Journal.*

THE MARTYR TO THE VACCINATION LAWS.—Charles Frost, whose second indictment for refusing to have his child vaccinated has been pending for some time at Bow Street, was interceded for by a like-minded clergyman. The magistrate was privately informed by this champion that he ought to suffer death rather than inflict a fine. Mr. Flowers having demonstrated to Mr. Frost that smallpox hospital statistics were overwhelmingly against him, required him to pay 20s. and costs.—*Dublin Med. Press and Circular.*

NOTES AND QUERIES.

MESSRS. EDITORS,—There has been, of late, considerable discussion concerning prescriptions, and I would take advantage of the present state of the public mind to ask a question of the profession. What is the apothecary to do when he believes the physician has made a mistake—especially a harmless one—as, for instance, that of ordering a solution of twice as much chlorate of potash as the water will take up? Shall he follow the law to the letter, or shall he make a saturated solution? PHARMACIST.

We are of opinion that the directions should be followed to the letter, unless there is reason to apprehend danger from so doing, in which case the physician should be consulted. We shall be happy to hear the opinions of others. EDS.

DIED,—In Portland, Me., May 9th, of pneumonia, Dr. Gilman Davies, aged 57.—In London, England, after a long and severe illness, Dr. H. Bence Jones, F.R.S.

MORTALITY IN MASSACHUSETTS.—*Deaths in fifteen Cities and Towns for the week ending May* 3, 1873.

Boston, 143—Charlestown, 5—Worcester, 14—Lowell, 20—Milford, 3—Salem, 12—Lawrence, 16—Springfield, 7—Lynn, 13—Taunton, 3—Newburyport, 6—Somerville, 3—Fall River, 11—Haverhill, 4—Holyoke, 7. Total, 287.

Prevalent Diseases.—Consumption, 50—cerebro-spinal disease, 23—pneumonia, 21—scarlet fever, 18.

Deaths from cerebro-spinal disease are reported as follows:—Boston twelve, Worcester, Lowell, Springfield and Lynn two each, Charlestown, Fall River and Haverhill one each. Deaths from smallpox are reported as follows: Boston, Worcester and Holyoke two each. Of the deaths from scarlet fever, fifteen occurred in Boston.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, May 10th, 132. Males, 79; females, 53. Accident, 4—anæmia, 1—inflammation of the bowels, 2—bronchitis, 7—inflammation of the brain, 1—congestion of the brain, 1—disease of the brain, 4—cancer, 2—caries, 1—cerebro-spinal meningitis, 12—consumption, 29—convulsions, 1—croup, 2—debility, 1—diarrhœa, 1—diabetes, 1—dropsy, 2—dropsy of the brain, 1—diphtheria, 1—epilepsy, 2—erysipelas, 1—scarlet fever, 4—typhoid fever, 4—disease of the heart, 3—hæmorrhage, 2—inanition, 1—intemperance, 2—disease of the kidneys, 4—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 14—marasmus, 2—noma, 1—old age, 2—paralysis, 1—premature birth, 2—puerperal disease, 2—syphilis, 1—tabes mesenterica, 2—tumor, 1—unknown, 5.

Under 5 years of age, 38—between 5 and 20 years, 11—between 20 and 40 years, 39—between 40 and 60 years, 28—over 60 years, 16. Born in the United States, 86—Ireland, 29—other places, 17.

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Original Communications.

NOTES ON PEPSIN.

By Edward H. Hoskin, M.D., Lowell.

Much has been said about physicians' prescriptions being inaccurately compounded, and much fault found with the incompetency of apothecaries and their assistants—frequently, no doubt, without injustice to either party. As much fault may be found with some of the preparations, because of their impurities, and often of the positive inertness of what should be the active principle on which the efficacy of the drug depends. Amongst these preparations, pepsin is particularly alluded to.

The market is flooded with pepsin, of German, French, English, and American manufacture, its elixirs, wines, and troches—elixirs *per se*, and in alleged combination with bismuth, iron, strychnia, &c.—in fact, so elegantly, and apparently therapeutically combined, as to please the eye, taste and judgment of the physician, and by its promised combination, to appear to him as the very thing he wants in his daily practice. All is not gold that glitters, nor is all pepsin that is called so, nor do all its preparations contain the promised principle.

Curiosity at first induced me to examine a sample of Boudalt's pepsin, and getting a negative result, I still more carefully tried three other samples of the same make, and found all inert; I then tried Velpeau's, and with the same result, and then various samples of American preparation, but not one could I find that was in any way a solvent of coagulated albumen. I next tried some elixirs, and not one of these would produce the required result; then some of the wines, and with the same lack of success.

After these experiments, I came to the conclusion that pepsin, as sold in the shops, was a fraud, that physicians were defrauded of their success, and the patient of his health and his means, through the worthlessness of the drug supplied.

But on looking over a review of the new Pharmacopœia, in the Journal of March 13th, I noticed the mention of the pepsin made by Sheffer, of Louisville, and being anxious, if possible, to find a reliable article, I wrote to him for a sample, and received by mail two descriptions—"saccharated pepsin," and "concentrated pepsin." I at once experimented with them, and obtained most excellent results.

With one grain of the concentrated article, I obtained the solution of one hundred grains of coagulated albumen, and with five grains of the saccharated, sixty grains of albumen—in each case using one ounce of water and six drops of muriatic acid. With one grain, also, of the former, I procured the solution of 137 grains of raw, lean beef.

These results are, I think, eminently satisfactory, and prove, at least, that there is one reliable article to be had—of home manufacture, also, instead of heavily dutied foreign goods, and which so frequently are considered the only reliable preparations.

I have been sceptical as to the therapeutic value of the so-called pepsin wines and elixirs, and my experiments have proved that, at all events, the pepsin used in their manufacture is not of any use, for there is no solvent action exerted whatever on coagulated albumen by any one of them that I have yet tried.

This may be the proper place to describe the method I adopt for detecting the presence of what I will call active pepsin.

It is well known that the presence of albumen in diabetic urine is an obstacle to the detection of the sugar, and that a fine mauve or purple color is produced on the addition of either Trommer's or Fehling's test solution. It occurred to me that this reaction would just come in for my purpose. Take coagulated albumen, and put into the pepsin wine, or elixir; submit to one hundred degrees Fahr. in a water bath, and if there is any of the active peptic principle present, solution of so much of the coagulum will ensue, and the albumen reduced to an allotropic condition, which, when added to the test solution, would produce the purple color.

On trying the experiment, no such thing occurred; but, on making a simple solution of pepsin in water, adding acid and albumen, and digesting for half an hour, I procured a solution which, on addition of the cupreous test, at once yielded the splendid color; repeated trials have yielded the same results. Flesh, or cheese, may be used in place of albumen, as all that is required is to obtain a peptone, and the reaction will show it; hence proving that pepsin must have been present in order to its production.

I have repeatedly dissolved a perfectly good pepsin in sherry wine, added chlorhydric acid and albumen, and submitted to a water bath and then tested for peptone; but in no case have I been able to detect it. From this fact, I conclude that pepsin wines are useless, as far as the drug is concerned, and that the presence of the alcohol, or the small proportion of tannin, or both, destroys its catalytic action. Tannin, in solution, does the same thing. So, also, do most metallic salts; and here I would quote from Dr. T. King Chambers "On the Indigestions," page 94:—"But for the time named, I advise its being given alone, and the action not interfered with in general by other medicines. *Many* will really *prevent* its *chemical effect*, and all will confuse one's judgment of the advantage gained."

But, if to a peptone already formed, either wine, alcohol, tannin, or a metallic salt is added, the addition of the test will at once exhibit its reaction, though tannin, if in large quantity, somewhat masks it. From this, it appears that the failure of the test to indicate pepsin in wine or dilute alcohol, or in the presence of tannin, or a metallic salt, does not result from the action being masked, but from the fact of the pepsin (under the conditions) being inert.

If, then, these elegant pseudo-pharmaceutical preparations will not accomplish the conversion of a protein substance into a peptone in the test tube, there is, I think, small likelihood of their doing so in the disabled stomach. It is true the other ingredients may be of service, but often it is the pepsin that the physician is prescribing the compound for, and frequently the one thing the patient most requires; so that, if the above conclusions are true, then, indeed, are physicians laboring in the dark, and their patients done out of their health and their money.

Since writing the above, I have tried samples of Dr. Hawley's preparation, and find that his wine and glycerole of pepsin are good articles, but the wine does not appear to be a pure sherry, and the proportion of alcohol so small as not to interfere with the functions of the principle. They both will dissolve albumen, but not so actively as Sheffer's.

I give these few facts for what they are worth, and hope at least they may be of some service to the profession, especially to those who have not the time for making the investigations they otherwise would do, and to those who may have been disappointed in not obtaining results they may have been led reasonably to expect.

PARALYSIS DURING VARIOLA.

By S. G. Webber, M.D.

The article by Dr. Goss in the number of the Journal for May 8th, recalls to my mind a communication by Westphal, which I had lately read on this subject. Paralysis may occur after variola as after other febrile diseases, typhus, typhoid, yellow fever, and especially it is seen after diphtheria. In most cases, except after diphtheria, paralysis is seen most frequently after the severer forms of the disease, and seems dependent upon the severity. It occurs generally towards the close of the disease, or during convalescence. That it may occur near the beginning is, however, recognized by Trousseau ; and Graves refers the causation of the post-febrile paralysis to the initial backache. Both these writers consider that there is congestion or inflammation of the cord.

Trousseau is most clear in the statement of these views. He says: "This backache is not, as has been supposed, a muscular pain, it depends upon an affection of the spinal cord ; here is the proof : in rather a large number of cases—and last year within a few days I was able to show you two cases—the lumbar pain is accompanied with paraplegia. Without being questioned on this point, the patients themselves complain of this paralysis ; they complain of painful numbness in the legs, which they cannot move ; and on examination you find the arms not affected. This paraplegia sometimes attacks the bladder, as shown by retention of urine, or at least dysuria.

"Though generally fugitive, these paralytic symptoms may in some cases persist until the ninth and tenth day of the disease ; they frequently disappear spontaneously when the eruption appears. In other cases, however, they remain not only during the whole course of the variola, but even afterwards, and then form one of the complications of convalescence." (*Clinique Médicale de l'Hôtel Dieu*, tome i. p. 5.)

Trousseau mentions paralysis as one of the initial phenomena in modified variola. (Ibid, p. 28.)

Trousseau also reports a case of paraplegia in a young woman, at the commencement of a light attack of typhoid. The patient, six years previously, had been paraplegic for a year. In this case, as in Dr. Goss's, there was a predisposition on the part of the nervous system. (Ibid, p. 268.)

It is unfortunate that Dr. Goss could not obtain an autopsy. In Westphal's cases, to which reference has been made, this was possible.

On July 17, 1872, Westphal reported to the Berlin Medical Society two cases of disease of spinal cord in paraplegia after variola.* One case he followed in his clinic, of the other he only saw the autopsy. In the first, a young man previously healthy, 22 years old, was taken sick November 5, 1871, with headache, anorexia and chills. A few days later, a very scanty eruption of smallpox appeared. The whole disturbance was so slight that he did not stay a day in bed. On the third day, while going up stairs, his legs felt heavy, and for that reason he lay down. The urine had to be drawn off. The next morning both legs were entirely paralyzed. On November 12th, he was sent to the smallpox hospital, and, on December 2d, was transferred to Westphal's clinic. At the latter date, there was complete motor paralysis of the legs—only a slight movement of the toes could be accomplished—loss of reflex action, sensibility retained, paralysis of the bladder, bed-sore. The faradaic irritability of the muscles was retained. There was a gradual improvement until, on January 19, 1872, he could stand, and with the help of a cane could walk a few steps. Perityphlitis set in, and, on April 8, 1872, he died.

The second case was a patient of Dr. Levinstein, a man 32 years old, who, after slight prodromic symptoms, was taken sick with smallpox, January 24th. The eruption was moderately thick, but not at all confluent. On February 4th, there was incontinence of urine; the next day he awoke with complete motor paralysis of the left leg, with a sense of prickling, as if "going to sleep;" the next day the right leg was also paralyzed, and the fæces passed involuntarily. The insensibility of the legs was very much diminished. The muscles reacted well to the faradaic current. He died, with bed-sore and cystitis, March 3d.

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* Berliner Klinische Wochenscrift, Nov. 18, 1872.

Westphal found, at the autopsy, the spinal dura mater and pia mater not especially changed; the grey substance of the cord was hyperæmic, and, in some sections in the lumbar portion, the two halves differed in color; the right half had a clear grey appearance, the left half was of a dark brownish red color. The latter color was common to both halves at a higher level; this gradually shaded off into the normal color at the cervical portion. The white substance was not colored, contained little blood. The nerve roots were apparently normal. There was no special change in the brain. The sciatic nerve showed a very slight infiltration of blood between the bundles of nerve fibres.

Bichromate of potassa colored the diseased portion with unusual intensity, showing a very great severity in the disease; the distribution of the change was very irregular. In one spot, the gray and white substances on both sides were changed; at another, one side was affected alone, or more than the other: on other sections, the white and gray substances were differently affected, or the diseased portions were separated by healthy tissue. Foci of softening of the size of a pin's head, were found in the grey substance of the upper dorsal region. The microscope showed immense collections of granular fatty cells in the grey and white substance, and at the confines of the foci of softening; also hyperæmia confined to the diseased portions without a sign of hæmorrhage. The infiltration of the sciatic might have been post-mortem.

In the first case, the disease of the white substance was greater than that of the grey; the sciatic was normal. Westphal considers these cases of disseminated myelitis, and that the changes in the cord are sufficient to explain the paraplegia; therefore, the paralysis is not "functional."

The first of these two cases, it will be seen, closely resembles the case reported by Dr. Goss in the mildness of the variolous attack, and the early appearance of the paralytic symptoms, on the third day after the eruption. The arms were not, however, affected, and a cure was probable, until another complication occurred.

In view of these facts and quotations, it is legitimate to conclude, that in Dr. Goss's case, the paralysis was the direct result of the variolous disease, and would not have occurred alone.

Chalvet, in a thesis on *paralysie ascendante aiguë*, tabulates, under *etiologie*, three cases as occurring during or after variola, but does not refer to the cases nor the authors. As his bibliographic index includes only French authors, those three are probably to be found among them.

Progress in Medicine.

REPORT ON DISEASES OF THE THROAT.

By F. I. Knight, M.D. Harv.

(Concluded from page 500.)

Diphtheria.

(1.) Die Anwendung der Carbolsäure bei Diphtheritis der Kinder. (*Sitzungs-bericht der Gesellschaft für Geburtshilfe zu Leipzig.*) (*Allgemeine Medicinische Central-Zeitung,* August 14, 1872.) [Very successful.]

(2.) Vortrag über Diptherie; geh. in der *Berliner Medicinischer Gesellschaft* am 17 April, 1872. (*Berliner Klinische Wochenschrift.*) *Jahrbuch für Kinderheilkunde,* N. F., V. Jahrgang, 4 Heft.

(3.) Der Croup und die Diptherie. Dr. H. M. Cohen (Hamburg). *Allgemeine Medicinische Central-Zeitung,* October 9, 1872.

(4.) Natura e Therapie dell' Angina Difterica, del Dottor Oscar Giacchi. Pp. 23. Poppi, 1872. (*British Medical Journal,* Dec. 21st, 1872.)

(5.) Ueber Collapsus nach Diptherie. Prof. Fr. Mosler. (*Archiv der Heilkunde,* 1 Heft, 1873.) (*Allgemeine Medicinische Central-Zeitung,* Jan. 24 and 25, 1873.)

(6.) Zwei seltnere Vorkommnisse bei Diphtheritis. Von Dr. Huebner, Docent in Leipzig. [In the first case there was erysipelas of the face, and in the second the disease was limited to the larynx, and also there was found, quite independent of the diphtheria, an old, genuine, primary tuberculous affection of the bronchial glands.]

(7.) Ueber innere Behandlung der Diphtheritis. Dr. Kühne (Moringen). *Berliner Klinische Wochenschrift,* Feb. 10, 1873.

(2) Dr. Senator disputes that the fungi found in diphtheria have any special specific significance for this disease, because the same fungi occur in perfectly healthy individuals, and especially because in case of primary diphtheria of the larynx, with or without subsequent affection of the pharynx, the fungi do not occur, when no transference from the mouth has taken place (for instance, in those cases where tracheotomy has been performed). In consequence of a diphtheritic infection, there arises, according to Senator, either a simple catarrh or an epithelial degeneration, erroneously called croupous pharyngitis; or the true diphtheria, necrotic inflammation, with infiltration of the mucous membrane, which may lead to angina gangrenosa; or, finally, a genuine croupous inflammation of the respiratory mucous membrane. But none of the forms is characteristic of diphtheria, and may arise without diphtheritic infection; for instance, the epithelial degeneration in the throats of very sick patients, which is perhaps similar to the degeneration in the bladder and urethra, connected with the production of ammonia. Neither can the diphtheritic paralysis be looked upon as peculiar, but as analogous to the paralyses after dysentery, the puerperal paralyses, and urinary paraplegia. Senator speaks against all very forced local treatment.

In the discussion which followed, M. Wolff and Zülzer spoke against the summary dismissal of the fungi question.

Langenbeck admonished against the too enthusiastic acceptance of the fungi theory, and mentioned his own disappointment, when he thought he had discovered the bearer of the infection in mucus, at finding the same fungi in the sweat of a riding horse.

Schweiger maintained the special nature of the diphtheritic paralysis. He said that even the beginning of paralysis in the uvula was characteristic, from which it passes over not to the trunk, but to the ciliary branches of the oculo-motorius.

Waldenburg said the anatomical and clinical standpoints must be different. In a clinical sense, there is no distinction between croup and diphtheria; that is, the same cause can produce diphtheria in the pharynx and croup in the larynx. Under diphtheria, however, is to be understood, clinically, exclusively the contagious miasmatic disease, independent of season and climate, accompanied by general appearances of infection, whilst laryngitis membranacea is a non-contagious, non-epidemic, purely local inflammatory affection of the larynx.

Waldenburg considered it now decided that diphtheria, in the beginning, is local, and becomes general secondarily. The relation of fungi to the disease, however, he did not think established. The treatment of laryngitis membranacea should be antiphlogistic, that of diphtheria tonic; for the latter, however, he recommends local treatment, lime water, lactic acid, fumes of bromine, and carbonate of lithia, but considers cauterization injudicious. He considered lime water only beneficial when employed in form of frequent and long-continued inhalations.

Traube said there was a peculiar specific disease (diphtheria) which either mediately or immediately could produce various results in the pharynx, indeed, not only a necrotic, but also a "pellicular" inflammation; the two forms also may exist near one another. Traube spoke in favor of the employment of the mercurial ointment in diphtheria in strong individuals, when the process is encroaching upon the larynx from the pharynx. He also employs lime water and cauterizes, but spoke against the tonic treatment recommended by Waldenburg, unless there is violent fever, with collapse.

Senator said that he did not share the good opinion which Waldenburg had in regard to the solvent property of lime water, and that Gottwold did not maintain that bromine inhalations dissolved the croup membrane, but that they only promoted expectoration. (Senator is mistaken. Gottwold maintains exactly the opposite. Reporter in *Jahrbuch für Kinderheilkunde.)*

Lewin said that he distinguished a proto- and a deuteropathic diphtheritic process. The protopathic diphtheria attacks in preference mucous membranes covered with pavement epithelium, and standing in communication with the atmospheric air: the pharynx, the hard and soft palate, the palatine arches, the uvula, tonsils, base of the tongue, the conjunctiva and vagina. Indications of fever are altogether absent or slight. It very frequently ceases spontaneously; more rarely, proceeds into the larynx, and can here also cease spontaneously, or lead to a severe general affection. The contagion in the protopathic form of diphtheria is of a more fixed nature; therefore it occurs more sporadically. By appropriate local treatment, the spread of the disease can be prevented. The deuteropathic diphtheria affects, besides the above-mentioned organs, also the naso-pharyngeal space, the posterior.

nares, the œsophagus and the skin; this form has a great tendency to quickly invade the air-passages, more or less fever always precedes it, so that we must here consider the general poisoning as the primary affection. The contagion in this form is of a more volatile nature, and seems to be received through the respiratory organs (epidemic diphtheria). Local treatment avails nothing.

A third form of diphtheria is secondary to the exanthemata, typhus fever, variola, &c.; it also probably occurs in consequence of a volatile contagion, through the influence of putrid substances on the mucous membrane. Clinically, the croupous and diphtheritic processes present the same appearance, and seem to proceed from the same cause. Anatomically, there is a deposit or infiltration, according to the preëxisting histological condition of the affected tissue.

Lewin founds these views —

1. Historically, because no author ([?] reporter in *Jahrbuch für Kinderheilkunde)* since Brettonneau has distinguished the croupous and diphtheritic processes in general.

2. Because both processes can go on in one and the same individual.

3. Croup and diphtheria divide themselves exactly, in the larynx, between the mucous membrane covered with cylindrical and that covered by pavement epithelium. Lewin here appeals to Virchow, Rindfleisch and Wagner.

4. Primary croup of the larynx occurs very rarely, and even these few cases can be explained by the diphtheritic process in the pharynx having been overlooked, or by the process in the larynx beginning in the pavement-epithelium region, or, finally, by confounding them with severe cases of catarrhal laryngitis.

Catarrhal laryngitis may be accompanied by a train of symptoms in all respects coinciding with those of croup; indeed, in certain cases of laryngeal catarrh, there is formed upon the swollen mucous membrane a tough mass of mucus, rich in cells, and not easily moved, whereby the similarity is increased; in many cases, only the laryngoscope can help one to a positive diagnosis.

Fränkel denied that croup and diphtheria occur so sharply defined, according to the nature of the epithelium affected. He proposed, as a new means of dissolving membranes, pepsin, the rare occurrence of diphtheria in the stomach, which is strongly exposed to the contagion, speaking theoretically for its employment.

(3.) Dr. Cohen says that the conclusions arrived at from the above discussion, in the Berlin Medical Society, was that "diphtheria in the fauces is necrotic, in the larynx croupous," and proceeds at some length to show that this position is confirmed neither by the results of *post-mortem* examinations, nor by the history, pathognomonic signs, nor therapeutics of diphtheria.

(4.) According to the reviewer in the *British Medical Journal*, Dr. Giacchi gives a modest, and apparently a very conscientious, account of diphtheria in a country district—the agreeable hills which neighbor on the Arno in the early part of its course. A pure balsamic air distinguishes the country, with a large growth of fir tree and beech; no mephitic or marshy exhalation extends over it. But even here diphtheria rages epidemically. The robust peasantry are victims to it equally with the inhabitants of towns. In the many cases, however, seen by Dr. Giacchi, not once did paralysis ensue. Dr. Giacchi considers the affection as primarily local, and allows its essentially parasitic constitution; distinguishes it from specific fevers; considers the paralysis to be a neurosis, and the albuminuria to result from parasitic infiltration. As prophylactic, he relies on the sulphites; but these have disappointed him in the promise of cure. Quinine, wines throughout the disorder; locally, phenic acid, a drachm in six ounces of water, with a little alcohol, applied by means of a camel's hair brush, and atomized lime water, constitute the treatment recommended. Other caustics (even muriatic acid) he has found rather to torment than permanently to relieve.

CROUP.

(1.) Embolism in. MM. Bouchut et Labodie. *Bulletin de l'Académie des Sciences—Archives Générales,* Sept., 1872.

(2.) A Lecture on. Robert R. C. Jordan, M.D. *Medical Times and Gazette,* vol. ii., 1872, pp. 223 and 322. [Nothing new.]

(3.) Histologie des Croups und der Diphtheritis. Steudener: Boldyrew. *Centralblatt für die Medicinische Wissenschaften,* Sept. 28, 1872.

(4.) Zur Therapie des Croup. Leonpacher. (Traunstein.) *(Aerztliches Intelligenz Blatt,* No. 40, 1872.) *(Allgemeine Medicinische Central-Zeitung,* Oct. 9, 1872.)

(1.) MM. BOUCHUT et LABODIE-LAGRAVE say that, while the primitive lesions of croup and diphtheria are well known, the cardiac lesions have not yet been described; that there is almost always (in fourteen cases out of fifteen) an endocarditis, which is frequently the origin of emboli, which, with their consequences, are frequently found in the lungs and other organs and tissues; hence the new lesions to be studied in croup and diphtheria are—endocarditis, embolism, thrombosis and acute leucocytosis.

(4.) LEONPACHER reports two cases of "laryngitis crouposa," which got well under the use of the inhalation recommended by Schütz—℞. Brom. p., potassii brom., āā gr. v., aquæ dest., ℥v.—a sponge to be moistened with this solution and put into a large glass, which is held under the mouth and nose of the patient for ten minutes in every hour. Leonpacher says that he employs the term "laryngitis crouposa" "because, in practice, a diphtheritic inflammation of the larynx cannot certainly be distinguished from genuine croupous laryngitis. Those physicians to whom the gray patch on the tonsils suffices as a means of distinction, will consider the affection (in these two cases) as diphtheritic laryngitis." In regard to the inhalation, Leonpacher concludes that only the bromine is efficient, as the potash solution is not volatilized in the ordinary temperature of a room. The diphtheritic membrane was almost completely dissolved in the bromo-bromide of potash solution left over night, at least was very finely divided, although the color and smell of the solution showed volatilization of the bromine. Therefore, a method by means of which both the bromine and bromide of potash could work efficiently, as by atomization of the bromo-bromide of potash solution, promises still more certain success. Leonpacher believes that his two cases show good effect from bromine vapor by itself, but says that this effect does not seem to depend upon a solution of the membrane, but in an attack on the connection between the mucous membrane and the diphtheritic membrane, as the adhesive, tough surface of the latter disappears under bromine.

Leonpacher tried experiments of the effect of different solutions on the membrane coughed up. Lime water dissolved it in *fifteen minutes.* The bromo-bromide of potash solution dissolved it in thirty minutes, but not so thoroughly as the lime water. The vapor of bromine made it at first swell, then shrink up, and become dry and hard.

The slow development of the effect of the bromide of potash solution makes a long-continued application of this remedy necessary.

TRACHEOTOMY.

(1.) Beiträge zu den Anomalien des Gefässverlaufes bei der Laryngo- und Tracheotomie nebst Angabe einer Modification der Trachealkanüle. *Wiener Medicinische Presse,* June 2 and 9, 1872. Hofmokl.

(2.) Case of Tracheotomy, in which the Tube, having become detached from its shield, escaped into the Trachea, and was removed by a second operation fourteen months afterwards. John W. Ogle, F.R.C.P., and Henry Lee, F.R.C.S. *Medical Times and Gazette,* Sept. 21, 1872.

(3.) Die erste Tracheotomie mittelst der Galvano kaustik in Deutschland, wegen einer die Glottis von unten verschlissenden Neubildung. Von. Prof. R. Voltolini. *Berliner Klinische Wochenschrift,* Oct. 7, 1872.

(4.) Scald of the Glottis in a Child seventeen Months old; Tracheotomy; Recovery. Ferguson. *Lancet,* July 20, 1872.

(5.) Twelve Cases of Tracheotomy, with Remarks. M. E. Dudon. *Lancet,* July 20, 1872. [Six cases successful; remarks in favor of an early operation.]

(6.) Clinical Lecture on Tracheotomy in Cases of Chronic Laryngeal Disease. By Eben Watson, M.A., M.D. *Lancet,* August 3, 1872.

(7.) Zur Technik der Tracheotomie. H. Bose. *Centralblatt für die Medicinische Wissenschaften,* Oct. 5, 1872, from *Archiv für Klinische Chirurgie,* xiv., 137–147.

(8.) Die Tracheotomie mittelst der Galvanokaustik. P. Bruns. *Berliner Klinische Wochenschrift,* Dec. 30,,1872.

(9.) Tracheotomie bei Diphtheritis. Von Dr. Max Bartels. *Jahrbuch für Kinderheilkunde,* N. F. V. Jahrgang, 4 Heft, 1872.

(10.) Tracheotomy performed a second time on the same individual (adult, with syphilitic laryngitis). Stokes. *Records of Operative Surgery. Dublin Journal of Medical Science,* December, 1872.

(11.) Remarks on Tracheotomy. By Llewelyn M. Thomas. *Lancet,* Sept. 28, 1872.

(1.) Dr. HOFMOKL, in order to facilitate the introduction of the canula, proposes to introduce at first, an inner tube, with a closed wedge-shaped extremity, a little rounded front and back, and provided with two small openings, so that the passage of air through the tube by means of these may signify when the instrument is really in the trachea, which is often difficult to ascertain when one uses a catheter or any solid staff for this purpose; immediately the canula is in the trachea, the wedge-shaped tube is withdrawn and the common inner tube introduced.

(3.) VOLTOLINI has performed tracheotomy on a man, thirty-six years of age, by means of the galvano-caustic knife. The patient had berry-like growths obstructing the larynx below the vocal cords. The knife went through the soft parts as it would go through butter. The opening into the larynx was made at the crico-thyroid membrane, and extended downwards. There was scarcely any bleeding, except from one vein, to which, after the operation, it was necessary to apply tannin powder. The operation on the growths was postponed, on account of the condition of the patient (not the result of the mode of operating).

On the fourteenth day after the operation, on examination with the laryngoscope, the growths were not to be found, with the exception of a small excrescence under the right vocal cord. This is explained by Voltolini on the supposition that the growth was injured in the operation and sloughed away. Chloroform was commenced, but was not continued through the operation, on account of suspension of the respiration under it. The patient repeatedly said he had felt no pain from the operation; but curiously, when the blunt hooks were introduced to draw aside the edges of the wound, said they burned.

(7.) Dr. Bose says, that while tracheotomy under the thyroid gland is only of value in case of tracheal obstruction on account of the deep position of the trachea and the vessels occurring here both normally and abnormally, crico-tracheotomy also has its disadvantages; one frequently finds the larynx obstructed at the place of incision, and the canula is easily thrown out by the elasticity of the segments of the cricoid; and, besides, one has almost always to divide, also, one or several tracheal rings. He thinks the division of the upper rings of the trachea indisputably the best method of performing tracheotomy, if one could succeed in every case in drawing down the isthmus of the thyroid gland without bleeding or any hazard. A consideration of the anatomical relations shows that the so-called middle fascia of the neck is divided, under the thyroid gland, into two layers, which enclose this gland, uniting again at its upper border. All the vessels running in the isthmus of the gland lie inside of this fascia-capsule; the posterior layer of this sticks fast to the gland and the trachea, but can easily be separated from the trachea when one once gets behind it. This is most easily done at the top of the cricoid cartilage, where the fascia adheres more loosely; and here one is just above the fascia-capsule, and this, with the vessels and gland, can be separated from the trachea and drawn down, so that the tracheal rings are completely exposed. In nineteen out of thirty cases operated on by the author, an incision was made upon the cricoid, and a director pushed behind the fascia; without bleeding, and with the greatest ease, the thyroid gland could be separated and drawn down, even where there was hypertrophy of the isthmus.

(8.) Dr. P. Bruns, referring to Voltolini's operation of tracheotomy by the galvano-caustic knife (see 3, above), says that it was not the first in Germany, nor the second in the world, as claimed by Voltolini; but that the first two were performed in Tübingen, in his father's clinic, the third by Amussat, the fourth by Verneuil, and the *fifth* by Voltolini, but gives him the credit of being the first in *Breslau!*

Dr. Bruns says, moreover, regarding the operation, that it offers no advantage, for the reason that one cannot see, and so avoid or push aside the vessels lying in the way, and that even the employment of feeble red heat does not prevent bleeding from vessels of more than one to two millimetres in diameter which have been wounded. He speaks not only from experience in the use of galvano-caustic in general, but in one of the cases of tracheotomy at Tübingen such hæmorrhage took place that the operation was suspended, and continued with the forceps and director. So that galvano-caustic tracheotomy fails entirely in the particular for which it would be preferred. These remarks apply only to the knife. Bruns admits that Amussat's method of using a galvano-caustic wire loop, which is slowly tightened, does prevent hæmorrhage, but the inconveniences and difficulties of its use do not require explanation.

(9.) Dr. Bartels reports 330 cases of tracheotomy in diphtheria, performed in the Bethaien Hospital at Berlin, fifty-eight by himself. The list includes ninety-nine of the one hundred published by Güterbock in 1867, one being omitted on account of being an adult; and it being the author's purpose to consider the operation only in children, only those under 16 years are considered. Of 330 patients, 103 were cured, 31⅕ per cent. The recoveries were much more frequent among the boys, 36⅔ per cent., while among the girls the percentage was only 24⅓. This fact Bartels does not attempt to account for.

The operation was performed six times on children under two years of age. All fatal.

In the third year, the operation was done fifty-one times, eight and a half times as many as in the first two years together. Then the number of operations increases till the fifth year, and reaches here the highest figures (74). To the eighth year the number diminishes, at first gradually, then more rapidly. In the ninth and tenth years the operation occurred only very seldom (eight and five times respectively); from the eleventh to the fourteenth only in exceptional cases. Between fourteen and fifteen, not at all.

As in the first two years of life, so did the operation in the period from eleven to fourteen, give very unsatisfactory results. Of six cases, all were fatal.

The most cures were in the ninth and tenth years, viz., five out of eight, and three out of five patients respectively.

The greatest number of operations, both in boys and girls, was from the third to the eighth year; 305 out of the 330 come in this period, with 95 cures.

It was noticed, during the epidemic of 1869, that the patients were usually brought to the hospital, for tracheotomy, on the clear, sunny days immediately following dull, rainy weather.

In regard to after-treatment, Dr. Bartels is convinced that steam and warm, moist applications can be dispensed with in most cases, and that local treatment of the diphtheritic places in the throat is not necessary. The tube was removed in from five to eight days. In a part of the cases, Dr. Bartels considers that he had an *indication for the removal of the tube*, in a little rise in temperature, and a little acceleration of the respiration, which he attributed to the irritation of it. With reference to prognosis, Bartels thinks that a pulse of more than 152, when several hours have passed after the operation, is almost absolutely unfavorable; yet he had one case, of a boy two and a half years old, where the pulse for several days was 150–164, and who, nevertheless, recovered. The higher the temperature, the more doubtful must be the prognosis. Of six children who died within twenty-four hours after the operation, there had been a temperature of 40° C.

(104° F.), and in the three others death ensued so quickly that the temperature was not taken. The prognosis is unfavorable if the respirations are more than sixty in the minute; in one case, however, of a child who afterwards got well, the respirations were sixty-eight the day after the operation; in the cases which pursue a favorable course, the respirations are usually twenty to forty in the minute. An increase in the number of respirations, after they have become less frequent, should make one suspicious, especially of pneumonia, which is usually fatal in these cases.

Reports of Medical Societies.

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY.

The annual meeting was held at North Cambridge, April 16th, 1873. The list of officers elected for the present year has already been published in the Journal.

Dr. Marcy, of Cambridge, read a statistical paper upon the influence of hygienic conditions upon the mortality in our cities. For the purpose of comparing different sections of Cambridge, he had examined over 4000 original physicians' certificates of death, embracing a period of five years. Comparison shows that the difference in mortality in different localities in Cambridge is nearly equal to that calculated by Dr. E. H. Clarke, a few years ago, between the Beacon Hill and Broad Street districts in Boston. Some discussion followed the paper, which will soon be offered to the Journal.

Dr. F. L. Thayer, of West Newton, read the annual address; subject, the History of Smallpox and Vaccination. He argued, from statistics: (1st), that during the practice of inoculation, the number of epidemics was increased, but their virulence diminished; (2d), that since the introduction of vaccination the number and the severity of epidemics has greatly diminished; and (3d), that equally favorable results have followed the introduction of re-vaccination.

The severity of recent epidemics is accounted for by the increased feeling of security on the part of the public, and a consequent carelessness in methods of vaccination.

In a few cases, vaccination does not succeed. This does not prove an exemption from the disease, and hope of ultimate success should not be given up. The occasional cases of erysipelas and pyæmia after vaccination, are more fairly to be charged to some constitutional condition than to the virus.

The number of vesicles is a measure of the amount of protective influence. Animal virus is more marked in its effects than humanized, but less sure to take. There is not sufficient evidence that humanized lymph deteriorates by transmission.

Dr. Renton inquired if the President had met with ill effects upon infants from narcotics administered to nursing mothers.

Dr. Wyman said that he did not recall any cases of injury from this cause, but that he always bore the possibility in mind in prescribing.

Dr. Vaughan, of Cambridge, had recently met with a case in which a child of three months, in an intelligent family, was narcotized to an alarming extent by less than nine drops of Magendie's solution of morphia, taken in divided doses. The first dose was taken at 10, P.M., just after nursing, and the second at 5½, A.M. The child nursed at 3½, A.M., and again at 7½. The first effects were noticed at about 8½, the child becoming stupid and sleepy, but this condition passed off. At 3½, the child nursed again, and within ten minutes was in a state of narcotism. It was 4½, A.M., before the child could be safely allowed to sleep undisturbed. The mother felt no effects from the morphia.

Dr. Willis, of Waltham, had seen a case of narcotism in an infant, following hypodermic use of morphia by the nursing mother.

Dr. G. J. Townsend spoke of the recent death of Dr. G. C. Lincoln, of Natick. Dr. Lincoln's health was not very good, especially in early life. He was always subject to headaches. He was at one time connected with the McLean Asylum as supervisor. He was an unusually able and acute practitioner, his most marked traits being accuracy and perfect honesty.

A few months before his death, he took a vacation of some weeks, on account of headaches and debility, returning apparently well. Headaches soon returned, and he consulted, at different times, Dr. E. H. Clarke and Dr. Ellis. The retina was also examined by Dr. Williams. Nothing was found indicating cerebral disease. After a course of bromide of potassium, he complained only of general soreness of the head, without marked headache. He drove to Wellesley, about three miles. Noticed, on the way, that the right hand was losing its power. Was found standing by his sleigh, the shafts of which were broken. He was confused, but conscious. Hemiplegia increased, and soon became nearly complete.

When seen by Dr. Townsend, his mind was clear, but complete aphasia existed. Became comatose within forty-eight hours, and soon passed away. No autopsy.

Dr. Townsend was appointed to draft resolutions in memory of Dr. Lincoln, and reported the following:—

"*Whereas*, By a dispensation of Divine Providence, Dr. George C. Lincoln has been stricken from the roll of the living:

"*Resolved*, That this Society deplore the loss, by his death, of a much respected fellow-laborer, a true, honest and faithful practitioner, an honor to his profession;

"That we have no empty words of condolence to offer her who has lost a devoted husband, her chief earthly prop. The Rod and Staff upon which he leaned in life, and which triumphantly conducted him through the valley of the shadow of death, will afford her priceless support and consolation;

"That we deeply sympathize with the community in which he lived, in being thus suddenly deprived of a most trusty physician, a highly valued and beloved fellow-citizen;

"That these resolutions be entered upon the records of the Society, and a copy sent to the family of the deceased."

Dr. Hildreth, of Cambridge, showed the skull of Abijah Ellis, who was murdered in December last. There are two extensive stellate fractures—one over the vertex, and the other near the posterior corner of left parietal bone. These are connected by a longitudinal line. The anterior fracture sends off two lines of fracture besides the longitudinal one: one downwards, across the right parietal and temporal bones, past the meatus auditorius; the second forward, through frontal and nasal bones and orbit; a third line leaves the longitudinal line not far from the posterior fracture, passing through left parietal and temporal bones, behind zygomatic arch. These three descending lines very nearly meet at base of skull. There is not much depression. At the autopsy, four scalp wounds were found. The chief, and probably the first inflicted, was over the occipital bone, nearly two inches to the right of the stellate fracture. There was a large clot in the line of fracture descending on the left side, from a ruptured meningeal artery. The membranes were congested. No other clot found. No blood at base of brain.

The President read an account of a case of painful subcutaneous tumor, or tuberculum dolorosum.

In February, 1873, a woman, aged 23, came to him with severe pain about the middle and just outside of right tibia, of two or three years' standing; much more severe during past year. Attacks were like flushes, extending generally upward, lasting from a few minutes to one or two hours. No cause named, unless fatigue. There was slight discoloration of the skin, as large as a pin's head. Bloodvessels of skin not enlarged. On pressure, a body of size of a bean was felt, rolling under the fingers seemingly in the cellular tissue, and attached by a small point to the skin; not tender, except when pain was severe. Tumor was removed, with the attached piece of skin. No pain since. Tumor was as large as a bean, firm, imbedded in cellular tissue; connected with capsule, but otherwise free. Being cut open, a white surface was presented, of cartilaginous hardness, without bloodvessels. No nerve cells were found with a moderate magnifying power.

The first and best general description is given by Wm. Wood, in *Edinburgh Medical and Surgical Journal,* in 1812; it also received its name from him. Dr. J. C. Warren, the elder [Surgical Observations on Tumors, p. 59], describes three cases; in two, removal was not allowed. In the third, a man had suffered seven years, and for four, very severely, from pain about three inches below knee. When seen by Dr. Warren, there was an open ulcer, following use of caustics; physical condition bad, with cough, purulent expectoration, quick pulse, emaciation, &c. Amputation was performed, and patient recovered in three months.

These tumors occur in adults; and in women, rather than men, in proportion of four to one. Paget [Surgical Pathology, 2d American Edition, p. 393] says, "They may be formed either of fibro-cellular or fibrous tissue, in either a rudimental or a perfect state," or "they may be fibro-cartilage."

Wedl [Pathological Histology, p. 401] found "a new formation of connective tissue which, at any rate for the most part, retained an embryonic character." "Not a trace of nerve substance could be discovered in the interior of the nodule." Billroth found muscle cells, but no nerves; Bärensprung, peculiar knots upon the bloodvessels around tumor. Paget thinks they are not neuromata, because nerve fibres cannot be demonstrated in them; because neuromata are often multiple, are unlimited in size, and are most frequent in the male sex; these occur singly, are smaller in size, and more frequent in women.

Some observers consider these tumors to be developments of the Pacinian bodies.

Virchow [Die Krankhaften Geschürelste, vol. iii. p. 241] says that he has seen one removed from the knuckle, which a nerve entered and left, and the mass was made up of obscure nerve fibres. He adds, that most pathologists of the present day would call such tissue briefly fibroid, fibro-plastic, or fibro-nuclear, and thinks that we need more and more exact observations.

There is a point worth noticing. Cartilage is not known to have nerves; it is not sensitive; when inflamed, it is extremely sensitive, but even then it has no nerves, as far as is known. Has not cartilage assumed new functions? In painful subcutaneous tumors, has not connective tissue similarly assumed new functions?

Dr. Norris, of East Cambridge, showed photographs of a case of ectopia cordis, which was described in the JOURNAL.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, MAY 22, 1873.

THE TRIAL.

IT appears that the action of the Massachusetts Medical Society, in maintaining its internal discipline and in executing its by-laws, has excited considerable interest beyond the limits of the association itself. It might be thought that the Society had the privilege of managing its private matters in its own way, and that it was not under a necessity to publish the details of its doings, if good reasons for privacy existed. But, thanks to an independent and enterprising journalism which is bound to publish news, no matter how surreptitiously obtained, and thanks especially to the homœopathic gentlemen who have indulgently supplied the excluded reporters with items in answer to their re-iterated calls, the discriminating public has been served with what the newspapers have called "*full* reports of the proceedings." Those who cared to do so have read in these reports the ingenious and plausible homœopathic statements which were meant to be so well adapted to strike the popular judgment effectively; and if, through special zeal, some of the arguments appeared in print before they were spoken, the enterprise was all the greater.

But the public must remember that it has been indulged with only one side of the case; it is not yet in possession of the clear, positive statement of the *facts* which Dr. Hodgdon enunciated in behalf of the committee of accusation; and as the public is not called upon to decide this matter any more than it would be to decide a question of irregular membership in a typographical society, for example, it is not probable that Dr. Hodgdon's argument will appear in print. It was meant for the ears and the understanding of the Board and for such members of the Society interested as chose to attend, and for nobody else.

We are aware that the subject is of more than local medical interest, inasmuch as the result will be deemed a precedent; and we can understand that some degree of curiosity exists in other places regarding the decision of the court. When that decision shall have been promulgated it will be seen, we believe, that the question at issue has rested on facts and not on opinions, and that the verdict is accordingly.

The following Editorial on the "Boston Difficulty," which we quote from the Philadelphia *Medical Times* of the 10th inst., shows how the subject, in all its lights, is regarded at a distance from the scene of action.

"From very vague items in the daily papers, our readers have doubtless become aware that certain members of the Massachusetts Medical Society are on trial, charged with practising homœopathy. Exactly what is being done we have been unable to learn by study of the secular papers of Boston; but we believe a court medical is in session, unfortunately with closed doors. This matter is one of no ordinary moment, and it is to be hoped that those having it in charge will proceed with the utmost prudence and judgment. The question, we take it, is as to the right of the adherents of any exclusive dogma to demand the privilege of entrance or of continued membership in a society composed of practitioners of scientific medicine, and their power to compel their admission to such privileges.

"If an association such as the Massachusetts Medical Society has the right to frame its own laws, it certainly has the right to decide as to the qualification for membership. If those conditions are infringed by any of its members, it as certainly has the right to expel the offending persons. Should this be denied them, the sooner they dissolve their organization and form a new one, the better.

"The fact is that the bigotry and narrow-mindedness are not on the side of the so-called 'regular profession,' but with those who would exclude, if they could, all practice not based on their own notion. But if it is true that '*similia similibus curantur*,' it must be so in all cases, simple or complex, slight or desperate. That this law is not of universal application, or at least cannot be always appealed to by its adherents, is abundantly proved by their own published records. And yet they, hugging their dogma with one hand, and with the other continually gathering experience from 'allopaths,' who 'bleed, blister, leech, and purge their patients to death' (see any number of any homœopathic journal), cry aloud for recognition as brethren from these 'old fogies' and 'conservatives.'

"The points in regard to which prudence and caution are especially called for in the conduct of this matter are, the clear showing of the exact difference between honest homœopathy and honestly scientific practice, and of the reasons why the two cannot be made to harmonize, or even to work side by side in any medical organization. There must be no martyrizing of the dogmatists, no shirking of any of their arguments, no stifling of any claims they can sustain. We hope, and are willing to believe, that the business is in safe hands."

Flowers and Fever.—The *British Medical Journal,* March 29th, 1873, notices the researches of Mantegazza relative to the development of ozone in some plants, and of Meissner and others regarding the production of certain antiseptic gases during the formation of cloud and smoke.

"It appears from the researches of Prof. Paolo Mantegazza, of Pavia, that, in some plants, ozone is developed by the direct rays of the sun, whilst in others the action, once commenced in solar light, continues in darkness; thus cherry-laurel, clove, lavender, &c., are plants which develope ozone largely on exposure to the sun's rays; so, also, do the narcissus, heliotrope, hyacinth and mignonette, as well as some perfumes, similarly exposed, as eau-de-cologne, oil of bergamot, extract of millefleurs, essence of lavender, and some aromatic tinctures. He further points out that the oxidation of the essential oils, such as nutmeg, aniseed, thyme, &c., under the influence of light and air, is a convenient source of ozone, as they, even in small quantities, ozonize much of the atmospheric oxygen. He concludes that the ozonogenic properties of flowers reside in their essences, the most odoriferous yielding the largest amount of ozone. He therefore recommends the cultivation of herbs and odorous flowers in marshy districts and in places infested with animal emanations, and that persons living in such situations should perfume themselves with odoriferous essences."

Dr. Cornelius Fox, in his recent work on ozone, states that the cultivation of the sunflower in malarious districts has been urged, as it is said to possess the property of purifying air laden with marsh miasm, and of exhaling ozonized oxygen.

Hippocrates is reported to have extinguished the plague at Athens and elsewhere by kindling fires, and it is well known that he had great faith in fumigations. Fumigations with aromatics, and purifications by means of fires of odoriferous woods, were highly valued in the epidemics of the middle ages.

"The experiments of Meissner and others relative to the formation of certain antiseptic gases during the formation of cloud and smoke, deserve more than a passing comment. The modern chemical inquiry certainly appears pertinent to the solution of the ancient practice, and may be destined to explain why, for many centuries, it has retained a firm hold on the minds of the wisest of our profession.

"The popular notion that a pinch of snuff is a preventive against infection is scoffed at, not for any real reason, but simply because it is popular, therefore a vulgar error, but Dr. J. C. Murray, in his amusing and interesting work on 'Snuff-taking,' regards it as a disinfectant, for the aroma of powdered tobacco developes ozone. We must remember that this takes place after the plant has undergone a process of fermentation previous to its being manufactured into snuff. Meissner asserts that antozone is the cause of the cloud tobacco-smoke, the smoke of chimneys, and of gunpowder. The copious rains, says Dr. Cornelius Fox, which follow great battles, have been supposed to be due to some extent to this body, the decomposition of the cloud of antozone, water being either a cause or effect of the electrical excitement of the air. We have much to learn with regard to electricity, and the important part it plays in the production of ozone, both on sea and on land; we have, also, yet much to stimulate us to the investigation of this wonderful agent for the purposes of disinfecting water and food, as practised by the late lamented electrician, Andrew Crosse, who, by a mode of electrization of great simplicity, not only purified water, but rendered it antiseptic, so that it had the power of restoring the most putrid substances to sweetness.

"Although we have apparently wandered from our original subject, the perfume of flowers and their antiseptic power against fevers, yet the reader will acknowledge that both the fumes from burning wood and the galvanic contrivance to purify water are linked with it by means of electricity, whether developed during the vital process of vegetation, the chemical action of fire on wood, or that of water on two metal cylinders, differing in their oxidizable properties.

"To return, however, to flowers and sweet-smelling herbs, we find Dr. Mantegazza urging the propriety not only of planting herbs having powerful odoriferous properties, but others, like the sunflower, which, although possessing no particular perfume, are said to have extraordinary ozonigenous power.

"If there be protective virtue in the sweetest living gems of the earth, let their culture be in every direction encouraged; let the garden-plot, near the cottage of the agricultural laborer, be filled with every simple herb or flower, that like the mignonette, thyme, laurel, sunflower and lavender, sheds its purifying odors around; let the window-gardening be more than ever a favorite relaxation for the mewed-up artisan of the town and city. Let experiments be made on all kinds of the poor cottager's present pets; let us see what ozonigenous powers his favorites have, for instance, the scarlet 'Tom Thumb' geranium, at once so gay and cheering.

"In our cities, let us emulate the citizens of Laurentum, and plant sweet bay along our embankments, in our parks and gardens, and even in our deserted churchyards and our fast-filling cemeteries. Let us, however, in the meanwhile, follow up the footstep of nature in our chemical laboratories, and learn how to increase the store of our natural air- and water-purifiers by a patient investigation of the properties of our indigenous flora in their relation to malarious emanations."

Resuscitation of a New-born Infant after nearly Four Hours of Artificial Respiration.—This instructive case is reported by Dr. John J. Marshall in the *Medical Press and Circular.* Upon being called to the mother, the right arm and funis was found to be presenting, and, after a short delay, "turning" was resorted to and delivery effected. The child, when born, was apparently lifeless, so that the funis was divided, without ligature, to see if any blood issued from the cord, and the child never cried; while slapping, cold water sprinkling, and brandy application failed to elicit any indications of life. When the child was placed on the table and in the light, faint pulsations of the heart were noticed, which led to attempts at artificial respiration. The method in which respiration was maintained is well described. The infant having been laid upon his back and rolled in a warm blanket, was so placed that the head extended over the edge of the table, and was allowed to droop a little, to prevent the air passing into the stomach. The face was next covered with a towel, and the little nostrils having been compressed with the left thumb and forefinger of the operator (his right supporting the head), air was regularly and forcibly breathed into the lungs, and again expelled from them by an assistant pressing alternately with his two palms on the chest, which was also vigorously rubbed with brandy.

This treatment, *after an hour's* steady prosecution, the heart's action in the meanwhile being almost imperceptible, was rewarded with one voluntary inspiration. The artificial respiration was patiently persisted in, and at the end of another half-hour, a second single gasp was given. Hot baths and the treatment recommended by Sylvester and Marshall Hall were next tried, until, at last, the child began to breathe regularly at the rate of fifteen respirations per minute, this being at the expiration of nearly four hours after birth.

Dr. Marshall concludes with the observation that, out of all the methods of resuscitation employed in this case, the breathing and expulsion of warm air appeared to have the most beneficial effect on the infant, and especially when the mouth to mouth breathing was combined with the raising and depressing the arms.

The result of this case should encourage the practitioner not to regard as hopeless the condition of those infants who may be born in a state of defective vitality, asphyxia or apoplexy; for if our efforts at resuscitation are only persistently maintained, we may often succeed, even after the expiration of hours, in restoring the child to life.

THE BLOOD IN RELAPSING FEVER.—According to the observations of Obermeier *(Medical Times and Gazette*, March 29th, 1873), the blood of persons laboring under relapsing fever contains peculiar filiform bodies, which exhibit very active spontaneous movements. A drop of blood extracted from such a patient, and mounted, as usual, with the necessary precautions, presents these bodies among the corpuscles when magnifying powers of 400 to 900 are employed. They appear as extremely delicate threads of the thickness of a fibrous filament, and of the great length of one and a half to six times the diameter of a red blood-corpuscle or more. Several of the bodies may be seen on the field at once; and so long as the preparation is fresh, they exhibit active movements—not only changes of form, moving and alternately coiling and uncoiling, but also changes of locality, by which they slowly or suddenly escape from the field of view. Altogether, the movements remind one of spermatozoa. Hitherto, Obermeier has found these filaments during the fever only, and shortly before or during the crisis—not in the interval. Sometimes they are to be seen one day, and not the next. He could not find similar bodies in the blood of healthy persons, or of persons suffering from other diseases. Of their nature, he will not yet give a decided opinion.

INJURY OF THE SPINAL CORD, OCCURRING THROUGH THE MOUTH.—At a recent meeting of the "Surgical Society of Ireland," Mr. H. G. Croley gave the history of an extraordinary injury of the spinal cord. It appears that a boy, eight years old, was engaged in playing with the steel rib of an umbrella, and that, while holding the rib in his mouth, he fell from a bed to the floor in such a manner as to drive the steel point through the back of the pharynx. The steel was drawn out by the child himself. The immediate results of the injury appear to have been a slight hæmorrhage, accompanied by nausea; during the night, the child was delirious, and, upon the next day, he was observed to have double vision. The symptoms getting no better, on the third day after the injury, the boy was brought to the hospital, when he was for the first time seen by Mr. Croly. Upon examining the throat, a punctured wound was noticed at the back of the pharynx, on a level with a probe passed back under the velum without raising it. On being put on his legs, the child tottered. He had convergent strabismus, some intolerance of light, and very marked febrile disturbance. It was concluded, from these symptoms, that the rib of the umbrella had penetrated to the spinal cord, between the first and second cervical vertebræ. The treatment consisted in the application of leeches to each side of the spine, and ice to the shaven head, and the administration of calomel and James's powders. There was a difficulty in swallowing; the temperature ran up to 102° and 105°; the child whistled, screeched, had the knitted brow, and threw back his head. These symptoms were for a time quite alarming, but the boy made a good recovery.

Mr. Stokes, tried, in the dissecting room, the effect of passing in a sharp piece of wire at a place in the dead subject corresponding with the wound in the child's throat, and, upon subsequently removing the spinous processes and the laminæ, he found the wire had pierced the spinal cord between the first and second vertebræ.—*Medical Press and Circular*, March 19, 1873.

CASE OF RENAL ABSCESS, WITH CONTAINED CALCULUS, SUCCESSFULLY RELIEVED BY OPERATION.—This rare case is reported by Mr. Thomas Annandale, in the *Edinburgh Medical Journal*. The patient, a farmer, aged sixty-three, had been suffering for several weeks from gastric and renal derangement, the symptoms increasing in severity, and finally pointing pretty clearly to some affection of the right kidney. The first examination determined that there was tenderness on pressure over the lower half of the right kidney, and below it in the direction of the ureter. A very slight fulness in the same region was noted, but no marked swelling could be detected. No fluctuation could be felt, and the introduction of a fine trocar in the lumbar region gave no result.

At the expiration of nearly a month, he was seen for a second time by Mr. Annandale, and upon this occasion his symptoms were very much worse. It was now thought that deep fluctuation could be detected through the anterior abdominal wall, just below the region of the affected kidney, and, in accordance with the urgent request of the patient, it was decided to try and do something for his relief, and make at least an exploratory incision. The incision was made through the abdominal wall, in the situation and direction of the incision employed for the ligature of the common iliac artery. Pushing aside the peritoneum and abdominal contents, the psoas muscle was reached with the finger; by the inner side of this muscle an abscess was detected, and within this abscess-cavity was found a calculus, the size of a horse-bean, which was seized with the forceps and removed.

The operation gave great relief, and the patient improved steadily up to the fifth day, when a small quantity of thin, feculent matter passed the wound, and fæcal matter continued to pass the wound for nine days ofter the operation, from which time no further discharge was observed. By the end of a month, the patient had apparently made a good recovery.

In commenting upon this case, Mr. Annandale remarks that the whole trouble had its origin in a renal calculus, which had given rise to suppuration and ulceration, and in this way escaped from the kidney. The abscess, passing downwards, was preparing to empty itself into the ascending colon or cæcum; in fact. a small opening of communication with the intestine had already been made, and the further destruction of the intestinal wall was only prevented by the free escape of pus. The result of this case affords additional encouragement to surgeons to operate early in cases of abdominal or pelvic abscess, in which the timely use of the knife may relieve suffering, and even save life.

FLUID ADHESIVE PLASTER.—The following formula for emplastrum adhæsivum fluidum, given by Mr. Enz, of Sembach, offers some interesting features:—Take of dammar resin, finely powdered, 560 parts; oil of almonds, 142 parts; castor oil, 70 parts; best glycerine, 10 parts; melt till the mass flows smoothly, and, when half cold, add, by degrees, 225 to 240 parts of spirit ether, in which aniline, free from arsenic, or any other coloring matter, has been dissolved. The plaster thus obtained is of the consistence of a balsam. The dammar resin is easily soluble in fat oils; by the addition of the spirit of ether, it is partly precipitated, but in a very finely divided, doughy state. Dammaryl and hydrate of dammaryl are not soluble in alcohol, and impart to the mixture an extraordinary sticking power. This plaster can be directly applied to wounds, and then dressed with cotton or linen, or spread thereon by means of a brush. What renders this plaster especially useful is its easy miscibility with other ingredients; for example, acidum carbolicum purum, hydrarg. chlorid. corrosiv., morphia and its salts, iodide of potassium, which are all soluble in alcohol; further, with powdered cantharides, belladonna, hemlock, &c.—*Medical and Surgical Reporter.*

OLD CLOTHES.—The danger of standing in other men's shoes, or of wearing their cast-off habiliments, is sometimes overlooked. M. Chevallier relates, in the *Journal de Chimie Médicale*, Jan., 1873, that a young man of good family died in December last, because, instead of buying new gloves, he bought a pair of cleaned gloves. Either from the cleaning having left a poisonous substance inside the gloves, or from some venomous insect lodged there, he felt presently a sharp pain in an abrasion which he had on the thumb. He bore it for a while, but at the end of half an hour he was obliged to tear the gloves off. His hand was swollen, and the spot was black. Gangrene followed, and death. The story reminds one of some of the well vouched histories of the effects of the bite of the juniper-fly in China, or of cases of the charbon or malignant pustule which are due to infection. M. Chevallier mentions another case, in which a second-hand pair of pantaloons conveyed skin-disease; and recent prosecutions for selling the clothes of smallpox patients suggest still more serious possibilities.—*Brit. Med. Jour.*

Medical Miscellany.

THE bitter taste of quinine, colocynth, aloes, quassia, and of other bitter medicines, may almost instantaneously be removed by chewing a small piece of liquorice root, says *La Tribune Médicale.*

BARON ADOLPH DE ROTHSCHILD has founded and endowed a hospital for diseases of the eye at Geneva, at an expense of £20,000, which is wholly borne by himself.—*British Medical Journal.*

CEREBRO-SPINAL MENINGITIS.—Prof. Loomis, of New York, who has had considerable experience in the treatment of this affection, gives the following:—Sol. saturat. potass. bromid., forty minims every two or three hours; quiniæ sulph., three to five grains every three hours; ice to the head and spine; blisters to the nape of the neck; bleeding, when the constitution of the patient will admit of it, and tonics during convalescence.

THE INTERNATIONAL EXHIBITION IN VIENNA.—A system of sanitary service is organized in Vienna, for the purpose of giving immediate attention to accidents, and carrying out measures of public hygiene, during the International Exhibition. There will be five stations, at each of which physicians will attend daily in turn; and at each will be provided dispensaries, together with a military carriage, for the transport of persons severely injured. At the central station there will be a small hospital for the temporary reception of patients while waiting for the means of conveyance.—*London Medical Record.*

SCIATICA.—Some cases of this disease which had resisted a variety of treatment, were cured at Bellevue Hospital, *almost at once*, by the hypodermic injection of morphia over the seat of pain, plunging the needle deep into the tissues, perhaps to the depth of one or one and a half inches.—*N. Y. Medical Record.*

POISONING BY COLORED SOCKS.—At a meeting of the Bombay Medical and Physical Society, the particulars of a case of poisoning by colored socks was read. A physician was applied to by an officer in respect to an obstinate eczematous eruption on the legs. On inquiry, it was found that the officer had lately worn socks of a bright red color. Suspecting the nature of the case, the physician recommended simple treatment and the disuse of the socks. A cure was soon effected. The socks were analyzed by a chemist, who reported that he readily obtained from the coloring matter a "distinct crop of octohedral crystals of arsenious acid." There were no constitutional symptoms present—the affection being entirely confined to the eruption on the legs, and a chain of vesicles following the course of the absorbents on the inside of one thigh.

HAMPSHIRE DISTRICT MEDICAL SOCIETY.—A very full and enthusiastic meeting of the Society was held May 13th. A paper on Bright's disease of the kidneys was read by Dr. Gardner Cox, and the annual election of officers took place. The meetings of the Society were never so fully attended as now. Officers for the ensuing year were chosen as follows:—

Dr. C. L. Knowlton, *President.*
Dr. Oscar C. DeWolf, *Vice President.*
Dr. James Dunlap, *Treasurer.*
Dr. J. B. Learned, *Secretary.*
Councillors.—Drs. O. C. DeWolf, S. A. Fisk, G. E. Thayer, Gardner Cox.
Censors.—Drs. C. B. Smith, James Dunlap, F. C. Green.
Orator.—Dr. Franklin Bonney.
Commissioner of Trials.—Dr. H. B. Stoddard.

AT the International Exhibition, opened last month in London, there was a display of surgical instruments. Among the more interesting features of this department were cases of old and obsolete appliances, including *fac simile* reproductions of instruments discovered at Pompeii, the famous speculum vaginæ with the rest. A circumcision knife of the fourteenth century and the lithotomy instruments of John Abernethy were also shown.

NORFOLK DISTRICT MEDICAL SOCIETY.—At the annual meeting, at Hyde Park, May 14th, the following officers were elected for the ensuing year, 1873-74:—

Dr. Robert T. Edes, *President.*
Dr. Silas E. Stone, *Vice President.*
Dr. A. H. Nichols, *Secretary.*
Dr. J. S. Green, *Treasurer.*
Dr. D. S. Fogg, *Librarian.*

Councillors.—Drs. R. Amory, G. J. Arnold, J. W. Chase, H. Blanchard, B. E. Cotting, W. C. B. Fifield, F. F. Forsaith, C. C. Holmes, E. Jarvis, J. Stedman, S. E. Stone, C. C. Tower.

Censors.—F. W. Goss, W. B. Trull, C. C. Tower, G. Faulkner, E. T. Williams.

Commissioner of Trials.—Dr. Robert Amory.

Committee of Supervision.—Drs. W. S. Everett, B. Cushing.

NOTES AND QUERIES.

THE "IMPARTIAL PRESS."—The *Boston Post*, of May 1st, says of the Massachusetts Medical Society, holding a trial session, in *accordance with the laws of the State* and with its By-Laws (as recently confirmed by the Supreme Court), that there was

"No relaxation of the strict rules, ... but the whole of the proceedings were easily ascertained, and are given below in detail."

The *same newspaper*, May 12th, says of a meeting convened *to obstruct the operation of a law of the State,*

"An adjourned meeting of the brewers and bottled ale dealers was held. . . . . . At the request of the meeting, the proceedings are at present withheld from publication."

Comment is unnecessary! VIENNA.

MORTALITY IN MASSACHUSETTS.—*Deaths in fifteen Cities and Towns for the week ending May* 10, 1873.

Boston, 132—Charlestown, 9—Worcester, 19—Lowell, 15—Milford, 4—Chelsea, 2—Cambridge, 19—Salem, 14—Springfield, 4—Lynn, 13—Fitchburg, 2—Newburyport, 7—Somerville, 7—Fall River, 25—Haverhill, 5. Total, 277.

Prevalent Diseases.—Consumption, 57—pneumonia, 28—cerebro-spinal disease, 25—scarlet fever, 9.

Deaths from cerebro-spinal disease are reported as follows:—Boston twelve, Lowell four, Cambridge and Charlestown each two, Worcester, Salem, Springfield, Lynn and Somerville each one. Worcester, Cambridge and Fall River each report one death from smallpox.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, May 17th, 134. Males, 79; females, 55. Accident, 4—abscess, 2—apoplexy, 1—inflammation of the bowels, 1—bronchitis, 5—inflammation of the brain, 3—disease of the brain, 7—cyanosis, 1—cancer, 1—cancrum oris, 1—cerebro-spinal meningitis, 9—consumption, 22—cholera infantum, 1—convulsions, 2—debility, 2—diarrhœa, 1—dropsy, 3—dropsy of the brain, 2—drowned, 1—erysipelas, 1—scarlet fever, 9—typhoid fever, 2—disease of the heart, 2—imperforate anus, 1—intemperance, 2—disease of the kidneys, 5—laryngitis, 1—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 10—marasmus, 1—measles, 2—old age, 4—paralysis, 1—pleurisy, 1—premature birth, 2—peritonitis, 2—puerperal disease, 3—disease of the prostate, 1—pyæmia, 1—syphilis, 2—smallpox, 2—tabes mesenterica, 1—tumor, 1—unknown, 4.

Under 5 years of age, 53—between 5 and 20 years, 19—between 20 and 40 years, 30—between 40 and 60 years, 17—over 60 years, 15. Born in the United States, 87—Ireland, 29—other places, 18.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

THREE CASES OF OVARIOTOMY, OF WHICH TWO WERE SUCCESSFUL.

By David W. Cheever, M.D.

Reported to the Boston Society for Medical Improvement.

Case I.—Mrs. —— is married, and has borne two children ; she is now 40 years of age, but still menstruating.

She has noticed an enlargement of the abdomen for five years. About two years since she met with a fall, and subsequently has suffered, at intervals, from severe abdominal pains. Last summer and autumn she had a long illness from dysentery, while at the seaside. She has never been so well since. Latterly, she has suffered from constipation, backache, and general disability to go about.

The abdomen is now very large, fluctuating from side to side ; resonant on the flanks. The abdominal walls are much loaded with fat. The uterus is rather high up, but movable. Its depth, with the uterine sound, is normal.

The patient has never been tapped, and never will consent to be tapped; but is urgent for a radical operation.

Diagnosis.—Apparently a single ovarian cyst, probably adherent.

The week immediately following menstruation was selected, and the operation performed Dec. 31, 1872. Drs. A. B. Hall and G. L. Underwood, of Boston, and Dr. Swazey, of Beverly, assisted me.

The stomach was entirely empty; but a glass of brandy and water was given a quarter of an hour before the operation.

The patient was protected from getting wet by Mr. Wells's rubber sheet, with an oval cut out over the abdomen, and fastened down with adhesive plaster. Only four ounces of ether were used, in Underwood's inhaler. The incision was between four and five inches long. The fat over the abdomen was an inch and a half thick. On reaching the cyst, it was tapped with Wells's trocar, and drained into a tub under the table. After the fluid had begun to flow, the end of the rubber tube attached to the trocar was kept under water, and thus a syphon action was maintained. There was but one large sac, which contained a pail and a half of fluid. The cyst was found largely adherent to the abdominal walls, to the omentum, and to about four inches of the small intestine. These adhesions were, for the most part, broken down by the hand. Several bleeding points on the omentum were tied with silk, and the ligatures cut short off.

After the cyst was delivered from the abdominal cavity, a large soft sponge, moistened with water and warmed at the fire, was put into the abdomen, pushing back the intestines; and the walls were then held together over it. Hot, dry flannels were applied outside the abdomen. Care was also taken to keep warmth applied to the feet. The temperature of the room was not much over 70°.

The pedicle was broad and short; and both on this account, and also because of the thickness of the adipose walls of the abdomen, it was found impossible to bring the clamp, which was put on it, outside the abdomen. The pedicle was then cut off, and the vessels in it tied separately with twelve silk ligatures. These were cut off short, the clamp removed, and the pedicle dropped back into the abdomen. A small amount of blood was sponged out of the abdominal cavity. Six deep silk sutures were passed, including the peritoneum; and two superficial ones. The wound was packed around with dry lint, and held by broad adhesive strips. The abdomen was then covered lightly with cotton batting, and a binder applied.

On removing the rubber sheet, the body and night-dress of the patient were found to be perfectly dry. She was lifted into bed and warm bottles applied to the feet. There was no apparent shock; no chilling of the surface; no sweating; the pulse remained good. She did not vomit after the ether. The operation lasted an hour and a quarter.

Four grains of opium were required the first night after the operation. For several days there was abdominal pain resembling colic. There was no distention or tenderness of the abdomen. On the second day the patient vomited several times, but ceased after taking hydrocyanic acid. Uterine hæmorrhage came on the third day, and continued, moderately, for four days. The urine was passed voluntarily, and without effort, for a week. The pulse never rose above 98. The stitches were taken out the fourth day. The bowels moved on the eighth day. On the fourteenth day the patient was moved from the bed to a lounge.

During the second week, pain in micturition came on, and the catheter had to be used. On the fifteenth day, an abscess burst in the wound, near the upper end, and discharged externally. This discharge continued moderately for a week. The patient suffered from an enormous accumulation of fæces, which must have gradually formed after the dysentery of the preceding autumn. A renewed uterine flow took place on the twenty-third and twenty-fourth days.

In the sixth week, after some days of backache and vesical irritation, an abscess burst in the rectum, and discharged in the form of purulent dysentery for some days.

In the eighth week, the patient was much better, and walked down stairs.

In the ninth week, a smaller abscess re-opened in the wound. Occasional small discharges took place for several weeks afterwards. When last seen, two weeks ago, her health and strength had greatly improved, and she walked out daily. The functions of the bladder and rectum were normal. She menstruated at regular periods. The old sinus at the lower end of the incision is still discharging pus.

CASE II.—Mrs. ——, about 38 years old, and having two children, is still quite regular as to menstruation. About two years ago, she began to be troubled by a noticeable enlargement of the abdomen, with a feeling of weight, and a backache. One year ago she consulted me, and I found a uniform, elastic, fluctuating tumor filling the front and left side of the abdomen. In the right inguinal region was a small, hard mass projecting above the pubes. The uterus was movable; normal in location and depth.

Two months later, the abdominal enlargement suddenly disappeared, accompanied by some hours of severe colicky pains. Her joy at this spontaneous rupture of the cyst was soon checked by its reappearance; and before long it was as full as before. It now began to enlarge rapidly, and to fill the whole abdomen. As it enlarged, the hard lump in the right groin was masked, and concealed from view. She now had dyspepsia, shortness of breath, and severe backache.

In December last, I examined her for the second time, and found the tumor much larger than before. The walls of the abdomen were thin, and fluctuation distinct from side to side. The tumor was uniform and movable. The uterus free; in natural position; and the cavity of normal depth.

The *diagnosis* was of a single ovarian cyst, not adherent, probably. She had never been tapped. Her dyspepsia, backache and semi-invalid condition made her desire an operation.

The operation was performed January 6th, 1873, with the assistance of Drs. George Hayward, Hall Curtis and G. L. Underwood.

The room was well warmed with an open fire of coke. The table was prepared with a drainage-tub beneath. The patient was dressed in the clothes she habitually wore at night, with the addition of warm stockings. The stomach was empty. A glass of sherry was given a few minutes before etherization. Less than four ounces of ether were used in Underwood's inhaler.

Mr. Wells's rubber sheet was put over the body, and made to adhere around the oval cut out over the abdomen.

The incision was four inches long. The abdominal walls were thin. There was a little bleeding, checked by catch forceps, left on. On opening the peritoneum, the cyst was punctured with Wells's trocar, drained into the tub, and quietly sucked dry by the syphon action of the rubber tube attached to the trocar, its lower end being kept under the fluid in the tub. As the sac collapsed, it was dragged up under the hooks on each side of the trocar. There were no adhesions, and the cyst was readily delivered. There was no leaking or hæmorrhage into the abdominal cavity. A large, warm sponge was immediately passed into the cavity left by the tumor, and the abdominal walls pinched together over it. Hot, dry flannels were then kept on the abdomen.

The cyst was attached to the left ovary, and the pedicle there was clamped and divided. It was now found that a broader and firm attachment existed to the right broad ligament. This was strong and hard, and seemed to be the place which had communicated the feeling of a solid mass in the right inguinal region before the operation. It was not thought wise to attempt a gradual separation of this attachment, but deemed better to put on a second clamp. This was done, and the connection severed. Both clamps, one above the other, were easily brought outside of the wound and retained there. The sponge was withdrawn, and the abdomen closed with four silk sutures, including the peritoneum. The clamps were packed around with dry lint. Adhesive strips encircled the abdomen; and the cotton batting and flannel binder applied as in the first case.

The cavity of the peritoneum was open twenty minutes.

On removing the rubber sheet, the patient was found dry and warm, and placed in bed. Warm bottles were applied to the feet. There was no shock. The pulse remained firm and slow. She vomited several times the first six hours after the operation, but never afterwards.

When the patient regained consciousness, she complained of severe uterine pains, like labor pains, and for these she took a considerable amount of Squibb's liquor opii comp. during the first night. The urine was passed voluntarily every few hours; and the catheter was not required at any time.

On the third day, uterine hæmorrhage came on; also pains resembling colic, with flatus. There was, however, no great distention of the abdomen, and no tenderness whatever. The pain was alleviated by hot bottles to the flanks, and by opium. On the fourth, fifth and sixth days, the pulse rose to 120. Very little nourishment was taken during the first few days, and it was not pressed on the patient. No stimulant was required.

Two stitches were taken out on the fourth day, but no fluid exuded from the wound. The other stitches and the two clamps were taken away on the ninth day, without hæmorrhage. The bowels moved spontaneously on the seventh day.

Convalescence was uninterrupted. It was retarded, however, by a slowness in cicatrizing of the stump of the pedicle. This obliged the patient to remain in bed six weeks. She is now able to resume her customary habits, and feels better than she has done for several years. Twice since the operation she has menstruated, and on each occasion there has been a discharge of blood from the pedicle, lasting several days.

CASE III.—Mrs. ——, 37 years of age, has had one child, nine years ago. For seven years past she has been conscious of some trouble in the abdomen. Menstruation has been regular, and the functions of the bladder and rectum have been perfectly discharged. She has, however, been a constant sufferer from dyspepsia. Appears now in tolerable health, though never strong. For the last two years a tumor has been very evident in the abdomen, and has slowly increased. She has suffered more and more from backache, dyspepsia and emaciation. On examination, a rounded tumor occupied the centre and left of the abdomen. Fluctuation was perceptible, but obscure. The abdominal walls were thin. The flanks and epigastric region were resonant. The tumor was obscurely lobulated in the left part of the abdomen. There was no tenderness or pain; but the tumor felt rather firm. Examination by the rectum revealed nothing. The uterus was small, very movable, and of normal depth; neither elevated, nor depressed in the pelvis. The bladder was normal. The patient asserted that the tumor began in the left groin. The cysts were very freely movable from side to side.

Diagnosis.—An ovarian tumor—probably multilocular, and more or less filled with semi-solid proles. She had never been tapped.

The size of the tumor was not so great as to threaten life immediately, and the patient was advised to wait. In several subsequent interviews, at intervals of a few weeks, she became urgent for an operation on account of her suffering from backache and dyspepsia, and because of the wearing effect of expectation on her mind.

The operation was done March 26th, 1873, with the assistance of Drs. A. B. Hall, A. D. Sinclair and G. L. Underwood.

The patient had a light, airy room, and an open fire. The bed was arranged at hand; and the table and tub prepared as before. The stomach was empty; a stimulant was given; and four ounces of ether were used in Underwood's inhaler. The rubber sheet was applied over the abdomen.

The incision, of four inches, soon penetrated the thin abdominal walls, and the tumor was tapped with Wells's trocar. No fluid came. On withdrawing the trocar, the cyst was found filled with a thick, yellow, gelatinous substance, like soft boiled custard. This, which was liquid at the temperature of the body, set as firmly as cheese in the cold rubber tube of the trocar. On passing the finger into the cyst, a mass of long, thin hair pushed forth. The incision was now at once prolonged upwards to the level of the umbilicus. The cyst was slit open with the knife, and its contents turned out with the hand. Great care was taken to prevent the contents of the cyst from leaking into the abdomen, and with entire success. The tumor was found to consist of a single cyst, without any adhesions, except a trifling one to the edge of the omentum. It was readily delivered, and the pedicle found to be the left ovary and broad ligament.

The warm sponge was now passed into the abdomen, the sides closed, and the flannels used as before described. The pedicle was clamped and cut off. The edge of the omentum, which bled a little, was tied with two silk ligatures, and the long ends brought outside with the clamps. The abdominal cavity was quite clean. Six deep silk sutures and strips of adhesive plaster were applied. The pedicle was now touched with the solid perchloride of iron. The cotton batting and binder were put on.

On removing the rubber sheet, a little of the cheesy contents of the cyst had soiled the night clothes. These soiled portions were cut off, and the patient immediately laid dry in bed. Warm bottles were placed beside her. The face was congested, but the pulse was good and the skin warm. The operation lasted forty-five minutes. The cyst was found to be of the variety called dermoid; and contained long hair and six teeth.

Immediately on coming out of the ether, the patient began to vomit, and nausea and retching subsequently prevented her from taking nourishment. There was no evidence of shock; and it is quite questionable whether the wretched condition of the stomach previously, which had driven her to the operation, was not the chief cause of her subsequent nausea and non-assimilation of food. She required the catheter, which was employed every six hours. The pulse rose in frequency, slowly, but steadily. There was never any tenderness of the abdomen, although on the third day she had colic, and subsequent distention with wind. These symptoms were combatted with warmth, opium and enemata; and when the stomach obstinately refused to assimilate, enemata of beef-tea, brandy and laudanum were given. On the third, fourth and fifth days, the symptoms growing worse, some of the stitches were taken out, and the wound opened just above the clamp. A probe and a catheter were passed into the abdominal cavity, but no fluid could be found. Meanwhile, the patient grew weaker and more emaciated, being unable to retain any food or drink. The upper portion of the wound healed, and the clamp loosened without hæmorrhage. The pulse ran up to 130, 140, and so on; and at the end of *six* days she died. No farther examination of the body could be made.

Death must, I think, be ascribed to the shock of the operation, and the disturbing effect of the anæsthetic on a nervous and a digestive system weakened by a long course of dyspepsia. Certainly there were no symptoms of hæmorrhage, of septicæmia, or of acute peritonitis.

The abscesses opening externally and through the rectum, in the first case, were probably due to suppuration of the pedicle, and to the ligatures shut up with it. For although in many cases given by Mr. Wells no trouble whatever followed the intra-peritoneal treatment of the pedicle, with ligatures cut short off, yet in others abscesses followed. In a patient of Dr. Keith's, the pedicles having been treated as above, recovery was continuous for six weeks. At the end of that time there was pain and irritation, followed by pelvic abscess, and finally, a fæcal fistula. This eventually got well. Mr. Bryant had a case in 1867, where the ligatures were discharged some months afterwards through an artificial anus, which, in the end, healed up completely.

The results of Mr. Wells's five hundred cases are much more favorable to the clamp than to any other method of treatment. He says:—"Patients who recover after the extra-peritoneal treatment of the pedicle, as a rule, soon regain and maintain perfect health. So do many of those who recover after the intra-peritoneal treatment. But some of them, sooner or later, suffer from chronic suppuration, hæmatocele, or fæcal fistula; or, perhaps without any definite local ailment, are many months before they become strong and well."*

The curious physiological phenomenon of menstruation through the stump of the pedicle, which occurred in case II., is not very uncommon. Mr. Wells thinks it takes place in at least one third of the extra-peritoneal cases. He goes on to say:†—"But if the patient be prepared for it, it is not of the slightest consequence. The Fallopian tube contracts completely after a few months, and there is no further escape. The fact that it does escape, sometimes, is to my mind an argument in favor of the clamp; for if menstrual fluid can escape through the partially closed Fallopian tube fixed in the cicatrized wound, so it may escape if the tube be left within the peritoneal cavity, and the result may be a fatal hæmatocele. I have known this to occur in cases where the ligature was used and cut off short; and I believe it to be one of the strongest objections to this method, or to any intra-peritoneal method, of dealing with the pedicle."

The tumor in case III. was of the variety called dermoid cyst. The same authority above quoted says:—"The accidental new formations in ovarian cysts, though not so common as the fluid contents, occur often enough to make them objects of pathological importance. Among these substances may be mentioned striated muscular fibres, brain and nerve tissue, bone, adipose tissue, and all sorts of dermoid structures—such as hair, teeth and glands." These peculiar cysts have been known to grow from other parts of the peritoneum, and even in man. "The osseous structure itself is that of genuine bone, the Haversian canals and bone-cells being arranged in lamellæ, though the cells are often large, and have fewer inter-communicating branches. Some of the teeth are perfect, and have all the structural arrangement of ordinary teeth, but the greatest part remain in a rudimentary condition. The number in a single cyst is sometimes extraordinary. Schabel describes the case of a girl, aged thirteen, not having menstruated, in whom there was an ovarian cyst, three times the size of a man's head, containing three pieces of bone, and more than a hundred teeth of all classes. Paget mentions a cyst in which more than three hundred teeth were found.

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* Diseases of the Ovaries, by T. Spencer Wells, p. 401.

† Op. cit., p. 373.

"The sacs often contain a large quantity of greasy substances, mixed up with tufts of matted hair.

"The question whether these dermoid cysts are the result of impregnation (direct or secondary) does not need discussion. They have a character quite distinct from that of extra-uterine fœtation, and grow independently of spermatic contact, in young children, and even before birth, and in situations and under conditions where such influence would be simply impossible.

"The peculiar formative and reproductive power inherent in the tissues of the body is as operative in the production of these vagaries, as it is in the crops of multiform morbid growths, which spring up everywhere, under circumstances of which we can give no rational explanation."*

This dermoid cyst (Case III.) is partially lined with skin, having, apparently, follicles and glands; and growing from it there is hair seventeen inches in length.

It also contains bony rudiments of an upper and a lower jaw. There are six teeth, of both the deciduous and permanent sets. The upper jaw contains three incisors and two bicuspids; the lower jaw has one molar. There is an excrescence which might pass for a rudimentary uvula and soft palate; and a cavity in the upper jaw, which might answer for the nares, or the orbit.

NOTE.—Two of these operations were done in Boston, and one in Charlestown. All were in private houses.

TWO NÆVI CURED BY MONSEL'S SOLUTION APPLIED EXTERNALLY. By JACOB GEIGER, M.D.—A male child, aged nine months, had at birth a "mother's mark" on his perinæum and over the pit of his stomach. They were at first flat, but slightly-elevated spots, and quite small. When the patient was about six months old, however, the tumors took on a very rapid growth; that on the perinæum occupying not only the entire perinæum, but a portion of the scrotum also, while that on the abdomen was an inch in diameter. The perineal nævus was kept so constantly irritated by the child's diaper, his urine, and his fæces, and having on more than one occasion bled considerably, I advised an operation for its cure. The mother positively refused her consent to any other precedure than one which consisted in some external application. I determined, therefore, to try the methodical use of Monsel's solution to both the growths. Making a mixture of equal parts of the liq. ferri persulph. and glycerine, I painted not only the nævi themselves thoroughly with this, but I applied it also for some lines beyond the healthy skin, and directed it to be repeated twice daily. In a week both tumors had diminished appreciably in size; and in less than one month from the date of the first application of the iron they had disappeared altogether.—*The American Practitioner.*

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* Op. cit., p. 70.

Reports of Medical Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. F. B. GREENOUGH, M.D., SEC.

FEB. 24th.—*Urethral Calculus.*—Dr. J. C. WARREN showed the specimen and reported the case.

The patient, a boy æt. 5, was first seen by Dr. A. H. Nichols, Sept. 17, 1872. At that time he was said to have had some trouble of the bladder for two months, crying out with pain whenever he urinated, and being very restless at night. He passed an irregular, small stream, which sometimes stopped short, and upon four or five occasions the urine was noticed to be tinged with blood. On Oct. 6, he was sounded, and a grating sensation was communicated to the hand as the sound passed through the prostatic portion of the urethra. On the 16th of February, 1873, there was complete retention of urine, and from that time until the operation was performed, the child suffered exceedingly, being seized with frequent spasms of tenesmus, unable to sleep, and taking little nourishment. For thirty hours previous to the operation, no urine had escaped. Dr. Warren passed a probe into the bladder, and a distinct sensation of grating was experienced. A lithotrite was introduced without difficulty, but no stone could be found. On introducing, however, his forefinger into the rectum, his thumb being on the perinæum, a calculus was plainly felt in the urethra. He first impulse was to push it back into the bladder, and then perform lithotomy, but remembering a case of Dr. Pancoast where this treatment had been followed by urinary infiltration and death, he had cut directly down on to the stone in the perineum and removed it. The calculus was about the size of a wren's egg, and the patient made a good recovery.

FEB. 24th.—*Death during Etherization.*—Dr. CABOT reported the case, as showing what he considered the only danger in the use of ether as an anæsthetic.

The patient, an old man, weak, but not excessively so, had undergone an operation which lasted three quarters of an hour. He was removed from the operating room, and the usual orders to watch him were given. Five hours afterwards, he had a violent attack of dyspnœa, and died. Food was found in one of the bronchial tubes.

He also referred to a similar case which had occurred some time ago. A fat woman, while lying on her back, under ether, vomited, and some of the vomitus getting into the trachea, killed her.

Dr. JACKSON said that he had been much astonished, to see in a quotation from Dr. B. Joy Jeffries's paper, that it was stated that in etherization, the less air that the patient was permitted to breathe the better; he had always supposed the reverse to be the case.

Dr. WILLIAMS said that Dr. Jeffries merely advocated putting the patient thoroughly under the influence of ether at first, and that his own experience coincided with this. He had often noticed that children who can be held, and on whom the sponge can be kept crowded down, come under the influence of the anæsthetic quicker and better than adults, to whom it has to be given with more delay. He thought that air enough to oxygenate the blood could always get in through the sponge. He felt sure that those patients to whom ether is at first given the fastest, take the least in quantity.

Dr. Warren was in favor of crowding on the ether at first, as was also Dr. Gay.

Dr. Greenough said that he had thought that there might be something in the vapor of ether, which made it possible for it, to a certain extent and for a short time, to take the place of atmospheric air in the lungs and support life.

Dr. Cabot said that, owing to the chemical composition of ether, this was impossible, and referred to Dr. White, who agreed with him.

Dr. Bowditch thought that there might possibly be something in Dr. Greenough's suggestion, as he had often noticed in the last stages of phthisis that inhalations of a small amount of ether relieved the dyspnœa more than he thought could be accounted for by the mere anæsthetic properties of the drug.

March 10th.—*A Case of Smallpox, fatal in three days, in a patient who had been unsuccessfully vaccinated a short time previously.* Dr. Shattuck reported the case.

The patient, a man æt. 48, entered the Massachusetts General Hospital, Dec. 3d, 1872. Lived twenty years in Texas, and had much intermittent fever. An attack of the congestive form, last summer, he says. He had served in the Confederate army. About Nov. 9th, ult., he contracted a severe cold, and still coughs a good deal at night, though his cough is less severe than it has been. Temperature normal in evening. Patient was improving slowly till Jan. 1st, when the record was, "has occasional chills," and quinine was ordered.

Jan. 3d.—"Complains of pain in upper sacrum, which kept him awake much of the night, and is aggravated on motion. A year or two ago, the patient had a similar attack of pain in the back—thought by him to be rheumatic.

Jan. 4th.—"Sitting up in a rocking chair, tilted back, and says he cannot lie down or stand up, on account of the pain in the back."

Soon after the visit, he was given a subcutaneous injection of morph. sulph., gr. $\frac{1}{5}$, and it was noticed that the patient's face was dusky, but there was no eruption on the face. In the afternoon he was somewhat delirious, and his back and thighs, arms and chest, were thickly studded with small petechiæ. Skin was cool to the touch. Pulse small and weak. Had another subcutaneous injection and stimulants, and died, Jan. 5th, at 7, A.M.

No autopsy was obtained. The patient was unsuccessfully vaccinated soon after entrance. A fortnight before his death he went down town, but after that never left the hospital.

Dr. Shattuck also reported the following case.

E. M., æt. 44, by occupation a sea captain, entered the hospital Feb. 12, 1873, and gave the following history of himself.

Has not had a sick day since he had the typhoid fever, fifteen years ago. Habits have been good. Eight days ago (Feb. 4th), being then in his usual health, was vaccinated by a physician on Hanover Street, with a friend at the same time. This was about 2, P.M. On going to bed that night, noticed that his arm, where the virus was introduced, was red and decidedly swollen. The next day, felt pains shooting through his limbs. His arm continued to swell and inflame, but neither at that time nor later was there any soreness or enlarged gland in the axilla. Friday (Feb. 7th), eat a usual dinner with relish about noon, and towards evening began to feel badly, and soon was taken with a sharp chill, vomiting and pain in back and head, very severe in character. Since then has been obliged to keep his bed. After twenty-four hours, the pain in his back and head left him, and then a red "rash," he says, came out all over him, beginning about the loins, accompanied by intense itching. Never had anything of the kind before. About this time, also, noticed that he was getting "sore," and motion became painful to him. Monday, Feb. 10th, the rash began to go off, and when he entered the hospital there was no trace of it to be seen. The soreness, however, increased, and of this he made the most complaint when first seen in hospital. When perfectly quiet, he was pretty comfortable, but could not move without considerable pain, not apparently in joints, but in muscles. Complained also of soreness of mouth. The seat of the vaccination on his arm was occupied by a large scab, the size of a half dollar piece, surrounded by infiltrated tissue. When first seen, the patient was in bed; decubitus dorsal; sweating considerably; countenance not remarkable. Thirst. Inappetence. Tongue red and fissured. Pulse 120, small and weak. Temperature 101·5°. Ordered Dover's powder, gr. x.

13th.—Nothing remarkable on thoracic exploration. Abdomen full and resonant. No pain when lying still. P.M.—Pulse 100. Temp. 100°.

14th.—Tongue red, with aphthous spots. Complains much of soreness of mouth and muscles. Pulse 96. Temp. 99·3°.

15th.—Slept well without Dover's powder. P.M.—Pulse 80. Temp. 98·3°. The patient made daily improvement, and, about the 20th, he noticed that the cuticle was coming away from his whole body. The scab was still on his arm, and there was more or less redness around it.

28th.—The patient is now nearly well, and ready to be discharged. Soreness has entirely disappeared.

His friend, who was vaccinated at the same time, has remained perfectly well up to the present time.

Dr. Shattuck also reported a fatal case of smallpox in a patient who had had the disease five years ago. The patient was to all appearances a strong, healthy man. The present attack was not preceded by any marked prodromes, as there was no great fever or pain in the back. Petechiæ appeared, but there were no vesicles.

Feb. 24th.—*Fatal Result from Vaccination.*—Dr. Wheeler reported the case.

The patient, a man about 35 or 40, had been revaccinated without result several times since infancy. One of his children having been successfully vaccinated, he took the crust, and on a Thursday was vaccinated from it. On the next day he was quite feverish. Pulse and temperature were high. At the point of vaccination a small vesicle, containing bloody serum, was seen, and the glands in the axilla were enlarged and tender. A cathartic was given him. The next day he was found in a low, feverish state, prostrated, and the temperature of extremities quite low. The swelling of the arm had extended below the elbow. Quinine was given, and the next day was passed more comfortably, with the exception of severe pain in the head. By Wednesday, the whole arm and hand had become boggy and livid, and incisions were made with the hope of evacuating pus, but none was found. Delirium set in, and he died on Saturday, the ninth day after the vaccination. The appearance of the arm was exactly that seen in a bad dissecting wound. The child from whom the crust was taken was healthy and robust, but the patient's wife thought that the crust used was one of secondary formation, the original one having been rubbed off. Dr. Wheeler thought that vaccination from the crust was much more dangerous than that with lymph. He had seen other cases in which trouble followed the use of the crust.

Dr. AYER had had a similar case, which, however, recovered after being confined to the house for four weeks. All the cases of trouble from vaccination that he had seen, had occurred in cases where the crust had been used.

Dr. H. K. OLIVER said that, on the other hand, he used the crust in preference to lymph, and that during the present epidemic he had not had a single bad arm.

Dr. FIFIELD thought that some fatal cases would occur, whether the crust or lymph was used, and reported the case of a child in Dorchester, who died two weeks after being vaccinated with a quill.

Dr. CHEEVER spoke of a case which he had seen about a year ago, of trouble supposed to be the result of re-vaccination. It was a week after the vaccination that he saw the patient, and at that time the arm was œdematous and boggy down to the fingers. Incisions were made, by which a small amount of pus was evacuated, and the patient recovered. He was intemperate in his habits. Recently, he was again called to see him, and found the identical appearances which he saw a year ago, with the exception of the scar of vaccination. The case was simply an attack of cellulitis in an habitual drunkard, which, in the first attack, owing to the coincidence of his having been vaccinated, was attributed to that cause.

FEB. 24th.—*Cervical Spina Bifida, and Cystic Tumors of the Neck, in a Fœtus.*—Dr. FITZ showed the specimen, which had been received by Dr. Jackson from Dr. Hitchcock, of Fitchburg.

The fœtus, macerated, had evidently remained in the uterus for some time after its death. At the lateral and posterior aspects of the right and left cervical regions, extending upwards above the ears, were two partially collapsed cystic tumors, of nearly equal size, one of which, when distended, was about the size of an apricot. When opened, the same was found to be made of several distinct small cystic cavities, the larger of the size of walnuts, lined by a smooth, glistening, transparent layer, apparently epithelial; the contents, a small amount of dirty yellow, opaque fluid.

In the lower cervical region is a single cystic tumor, of the size of a cherry-stone, unconnected with the tumors already mentioned, whose cavity communicated directly with that of the spine, which latter was widely separated at the point of communication. Its more intimate relations with the spinal cord could not be ascertained, the medullary matter being converted into a yellow mass of about the consistence of ice-cream.

SULPHO-VINATE OF SODIUM IN CONSTIPATION.—This drug is recommended by Dr. P. DeMarmon as a mild saline cathartic in cases of chronic constipation. It is found to be an excellent substitute for citrate of magnesia (which now comes so impure) or Seidlitz powders. The dose for an adult is three or four drachms. Mixed with Seltzer water, or in water to which syrup of lemon has been added, it makes a palatable drink.—*N. Y. Med. Record.*

Bibliographical Notices.

Transactions of the Third Annual Session of the Medical Society of Virginia, 1872. Richmond. 1873. 8vo. Pp. 177.

We hail with much pleasure the appearance of this interesting volume, as indicating the increased literary vitality of the medical profession of Virginia. The various papers are, as a rule, carefully prepared, and possess decided merits, although, we must add, many of the views expressed therein are far from being in strict accordance with our own. Many of these papers are contributions to clinical medicine or surgery, and as they embody the results of *bedside* experience, communicated in concise, unostentatious terms, they are, on this account, better calculated to convey to the reader solid information than are the most elaborate dissertations upon theory and practice.

We propose to give a list of the titles of these papers in regular order, and to single out from these for comment a few of the most important, premising that even to these articles the brief space allotted to us will permit of our rendering but imperfect justice.

1. *The Vis Medicatrix Naturæ.* This formed the subject of the annual address of the President, A. M. Fauntleroy, M.D.

2. *Medical Ignorance and Medical Reforms.* By Landon B. Edwards, M.D.

This constituted the annual address to the *public,* which, in accordance with the custom of the Society, is delivered during each session. This feature is to us a novel one, but it certainly commends itself warmly to our approval, as presenting a legitimate method for diffusing information upon a certain class of medical topics, in which the public take a lively interest; we refer more particularly to questions of sanitary science. It is not unnatural that the community should look toward physicians for instruction in these and similar matters, and where in any locality ignorance on these points prevails, it is the medical profession that must be held largely responsible therefor.

In the address of Dr. Edwards, several classes of empirical practitioners are attacked with no sparing hand, and the following anecdote is introduced to illustrate the 'system' of one of these delinquents.

"A gentleman, in exerting himself one day, felt a sudden pain, and fearing some internal injury, sent for a negro living on the plantation, who made pretensions to medical skill, to prescribe for him. The negro having sagely investigated the case, prepared and administered a dose with the utmost confidence of a speedy cure. No relief being obtained, however, a regular physician was sent for, who, on arriving, inquired of the negro what he had given? Bob promptly responded, 'rosin and alum, sir!' 'What did you give them for?' continued the doctor. 'Why,' replied Bob, 'de alum to draw de parts togedder, and de rosin to sodder 'em.'"

3. *Report on Epidemics of Piedmont District, from the years* 1846 *to* 1872, *inclusive.* By Alban S. Payne, M.D.

This paper enters quite minutely into an investigation of the thermometry, prevailing winds, hydrography, scenery, geology, mineralogy, &c., of this district. In considering the various theories of contagion and infection, the author proposes to simplify the question of miasm by dividing it into three branches, viz.: *Koino*, *idio-koino*, and *per-idio-koino-miasm*. "*Koino-miasm* is generated by vegetable decomposition, climatic alternations, &c., and capable of producing fevers of remittent and intermittent types. *Idio-koino-miasm* is the product of animal and vegetable decay, capable of producing typhoid fever, or remittent bilious fever with a typhoid tendency, or, more properly speaking, a typho-malarial grade of fever. *Per-idio-koino-miasm* is the product of animal filth solely, and is susceptible of producing typhoid gravior, or typhus fever."

Now, before proceeding further, we should just like to ask Dr. Payne one question. If this unique and fanciful subdivision is a *simplification* of the question of miasm, what would he consider a *complication* of the matter?

The experience of the author in epidemics of erysipelas, pertussis, intermittent and typhoid fever, and smallpox, is all related in an agreeable, vivacious manner. In certain respects, the paper is amusing from the glimpse it gives us of the writer's views on total abstinence. Speaking of a certain type of typhoid fever cases, he remarks, "These patients I always ask at each visit how they would relish a hot toddy, mint julep, a sherry cobbler, or a port wine sangaree. As soon as their response is favorable, I gladly permit them to make their own selection from this *carte blanche*, for I am always exceedingly anxious to put them on the alcoholic stimulants as soon as it is possible to do so without producing disgust." Again, in discussing the various treatments proposed in cases of smallpox, he says: "Many army surgeons recommend whiskey until the patient becomes 'blind drunk' or until a powerful emetic effect is produced. * * * * I appreciate the valuable remedial virtues of good old Bourbon whiskey too highly to degrade it to the common level of an emetic. I never prescribe a toddy, a julep, or a gin cock-tail, unless I wish it *to stick*."

4. *Paludal Fever.* By Alfred G. Tebault, M.D.

This is a continuation from the report of the last session of the committee on epidemics of the tide water district.

5. *The Anatomical, Physiological and Pathological Differences between the White and the Black Races, and the Modifications of the Treatment of the Diseases of the latter rendered necessary thereby.* By Thomas P. Atkinson, M.D.

It is maintained in this paper that the negro is inferior, mentally and physically, to the white, and that, owing to the peculiar organization and habits of the former, a different mode of treatment is indicated for their diseases. A table is cited, showing the great rate of mortality among the colored population of New York, to which the following comments are added: "Let all due allowance be made for the difference in the hygienic condition of the two races, and the result will still be as appalling as it is remarkable, proving my assertion that the physicians of our Northern States, owing to the comparatively few negroes amongst them, have ignored the diversities in their diseases, and have, consequently, overlooked the necessary difference in their treatment. The greater mortality amongst the blacks, as seen by this table, is but the natural result of this ignorance." It is the opinion of scientific men, who have given this subject their attention, that the high death rate amongst this class of the population is to be accounted for by the general insalubrity of the sections of the city inhabited by them, the crowded condition of their dwellings, insufficient nourishment, and the other influences of poverty. The assumption that the large rate of mortality is the result of *mala praxis* on the part of their medical attendants is not sufficiently supported by anatomical and pathological argument, and we venture, therefore, to assert, that Dr. Atkinson has failed to put a right interpretation upon the figures contained in this table.

Among the few authorities cited in support of these views, is the late Dr. S. A. Cartwright of New Orleans, from whose writings the following statement is quoted:—

"So great is the difference in the medical treatment demanded by the peculiar organization, physiology, pathology and habits of our black population, that very learned physicians from Europe and the Northern States, on first coming South, have felt and acknowledged their incompetency to treat their diseases successfully, until they have had time to make themselves acquainted with their peculiarities."

We would respectfully submit to Dr. Atkinson, that the introduction of any testimony like that of Dr. Cartwright is not at all calculated to strengthen his position. It happens that we not long since stumbled upon a volume of the *Southern Medical Reports* for the year 1850, in which are contained some of the extraordinary notions of this man, a perusal of which satisfies us that it was not with injustice that he was stigmatized in England as a renegade to science and humanity. Dr. Cartwright here attempts to prove that the negro races constitute a debased species of man, so different by natural conformation from the white race, that it is "*absolutely necessary for the safety of the State, and well being of society, that the latter should be subjected to different laws and institutions from the former.*" He also had the effrontery to intimate that the productions of those distinguished English physiologists Drs. R. B. Todd and J. C. Prichard are *abolition works in disguise.* The vagaries of such a partisan observer are not consonant with modern experience, and tend only to give offence.

6. *The Hypodermic Use of Sulphate of Strychnia as an Optic Nerve Stimulant.* By Wm. B. Gray, M.D.

7. *Large Pelvic Abscess, discharged spontaneously through the Rectum, and externally through the Saphenous Opening on the fore part of the Thigh. Recovery.* By John S. Apperson, M.D.

8. *A Case of Extra Uterine Pregnancy. Removal of the Fœtal Skeleton by Abdominal Incision; Recovery.* By Wm. D. Hooper, M.D.

9. *A Novel Case of Extreme Mobility of the Knee-joint in a New-Born Child.* By O. B. Jenks, M.D.

In this patient, a newly-born female infant, it was found, in extending her legs, "that the left one, instead of stopping at the usual point of extension, allowed the foot to turn backwards, so that the toes laid *(sic)* in the left groin, this motion being as free and easy as its extreme flexion." Dr. Jenks concludes the report of this case with the inquiry, "what could have been the cause of such a novel and abnormal action?" It strikes us that he has himself suggested the only possible cause of this mobility, viz.: abnormal laxity of all the ligaments of the joint, such as not unfrequently permits the spontaneous luxation and replacement of the large limbs, this power being sometimes possessed from infancy.

10. *Defective Vision, and the Principles on which it may be corrected by Optical Means.* By F. D. Cunningham, M.D.

11. *The Effect of the Use of the Sewing Machine upon the Health of Women.* By W. W. Parker, M.D.

This paper gives a concise and intelligent summary of the literature of the hygiene of the sewing-machine, and there are added the results of some original investigations by the author. It struck us, at first, that one who enjoys so high a reputation as Dr. Parker would have been able to contribute more from his own resources to the elucidation of this question than has been the case, but, it will be evident, that in Richmond, the place of his residence, the inquiry was not one which could be prosecuted to advantage. One new point is brought out, which we do not remember to have seen touched upon elsewhere, viz.: the small amount of strain put upon the eyes of machine operatives, as compared with that to which the eyes of hand sewers are subjected.

The conclusions arrived at are—

"*First.* That fatigue is not disease, and that there is no reason to conclude that the use of the muscles employed in machine work for a reasonable time is injurious.

"*Second.* That the machine may be used for four or five hours daily, in a family, by a lady in ordinary health, without injury.

"*Third.* That the damage to health in the factory is due to the hygienic conditions (bad air, &c.) under which the work is done, and the natural delicacy of some of the operatives, unfitting them for long-continued labor of any kind.

"*Fourth.* That the sewing-machine is a great boon to womankind, increasing her compensation, protecting her sight, and, in the family, lessening her labors."

12. *Report of the Necrological Committee.*

13. *New Method of treating Compound Fractures, and Stumps after Amputation, with Eight Illustrative Cases.* By Wm. D. Hooper, M.D.

14. *Diphtheria. Cases and Notes.* By J. H. Claiborne, M.D.

Some of the most interesting of these papers we have been obliged to pass over without comment, inasmuch as their practical value depends almost entirely upon a due consideration of their details, a useful condensation of which is not possible. The volume is not altogether free from grammatical errors and typographical blemishes, but its general appearance is on the whole quite creditable to those who have prepared it for the press.

BOOKS AND PAMPHLETS RECEIVED.

Mind and Matter, or Psychological Inquiries. By Sir Benj. Brodie, Bart., D. C. L., Vice President of the Royal Society. Pp. 279. New York: William Wood & Co. 1873. (For sale by A. Williams & Co.)

A Treatise on the Principles and Practice of Medicine, designed for the use of Practitioners and Students of Medicine. By Austin Flint, M.D. Fourth Edition, carefully revised. Pp. 1059. Philadelphia: Henry C. Lea. 1873. (For sale by A. Williams & Co.)

First Annual Report of the [Boston] Dispensary for Skin Diseases. Boston: John Wilson & Son. 1873. Pp. 16.

Address of Thomas M. Logan, M.D., President of the American Medical Association. Delivered at St. Louis, May 6, 1873. Pp. 25.

Transactions of the Medical Society of the State of New York, for the year 1872. Albany: 1873. Pp. 484.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, MAY 29, 1873.

THE TRIAL CONCLUDED.

THE investigation of the cases which have so long engaged the attention of the Trial Board of the Massachusetts Medical Society, has at length terminated in the expulsion of the accused members. Our readers will find the sentence of the Board in another column. The examination has attracted much attention and not a little discussion, in and out of professional circles. We congratulate the Society that it is in a way to be at length delivered of a source of annoyance to itself and of reproach from without. We point out some of the features of the case, which the proceedings have discovered.

The charter of the Homœopathic Society was granted in May, 1856, to seven members of the Massachusetts Medical Society, three of whom were among the individuals lately sentenced to expulsion, not for practising homœopathy, but for being members of an exclusive medical sect, and advertising themselves as practitioners of a special system of treatment.

By the charter of the Homœopathic Society, in its 4th section, it becomes the duty of its officers "to examine all candidates for membership concerning the practice of specific medicine and surgery."

On the part of the accused, every quibble has been made use of during the trial to enable them to retain membership. Some of them had joined the new association knowing that the laws of the older organization forbade it, and the others were members when the laws of the Massachusetts Medical Society were passed concerning irregular practice; but no one of them ever objected either to their letter or their spirit. They have done certain things which, of late, they have tried to undo by *ex post facto* action. They have now tried to make it appear that there is no requirement for membership in the Homœopathic Society, that its members belong to no exclusive sect and profess to practise according to no special dogma; that is to say, that, being homœopaths, they do not, in fact, practise homœopathy. As evidence of this, they point out article xvii. of their by-laws, which reads:—

> "Any person, having received the degree of Doctor of Medicine from a legally authorized medical institution and who sustains a good moral character, may become eligible to membership, after having been approved by the Board of Censors. He shall be elected by ballot at the annual or semi-annual meeting, and, after his election, shall sign the by-laws before becoming a member."

They also call attention to article second as showing their excess of liberality in scientific matters. This reads:—

"This society demands for itself absolute liberty in science, and, hence, requires of its applicants for membership no creed or confession of medical belief, but only the expression of a willingness to act for the furtherance of its declared objects."

The expulsion of members of the Massachusetts Medical Society for belonging to an association so liberal as this, would appear to be uncalled for, to those who can look no further. The trial commenced nearly two years ago, and the proposal to make these by-laws read as above only dates back to October 9, 1872, a year after the trial had begun, and they were only adopted on the 9th of April, 1873, less than two months ago. But how did their laws read previously to that time? Put aside the charter which speaks of the "practice of specific medicine and surgery," and which their new by-law ii. violates. Article xv. of the by-laws, in force a year ago, says:—

"Any person who has received the degree of Doctor of Medicine from a legally authorized medical institution, who sustains a good moral character and practises medicine in accordance with the maxim "*similia similibus curantur*" (the Italics are theirs), may become eligible to membership after having been examined and approved by the Board of Censors."

The amount of the matter is this. These men have advertised themselves as practitioners according to a specific dogma; their names have even appeared in the directory as such; they have been warned that in so doing they were violating a law which they helped to make or signed an agreement to obey; they altered their own law after they were accused of violating that which they acknowledged themselves subject to; they stated their belief in the doctrine, that to cure a disease one must give the medicine which will produce the symptoms of it, and yet say now that they practise what they call "allopathy," or any other system, if they think proper.

No one has objected to their giving any medicine they chose to. No one found fault that they believed in "*similia similibus curantur*." No one cared if they thought that a curative effect was produced by the ten billionth of a grain of anything. No one had anything to say because they pretended to believe, that the more a medicine is diluted the more its power is developed. No one disputed their right to believe, that chronic diseases all originate in the itch. The fault found was, that, having signed an agreement to do certain things, they violated that agreement by publicly professing to practise according to a certain dogma; although they have stated in their defence that the public profession was a falsehood, and that they practise according to circumstances, using any drugs as they please, and in any dose;

The finding and sentence of the Board of Trial stand as the deliberate and careful conclusion of a protracted investigation, and they are an assurance that the Massachusetts Medical Society will harbor no professed exclusiveness in dogma or practice within the pale of its membership, no matter how plausible or "liberal" the "new school" delusion may be made to appear to the public.

We can see no reason why homœopaths should desire to belong to the Massachusetts Medical Society at all. According to their present claim, they are far in advance of it and far more liberal. Noble martyrs in the cause of science, their trial has certainly advertised them to the world. They can act under their *new* by-laws as they may choose. They can give little pills or big ones; they can purge and blister; they can call themselves disciples of "absolute liberty in science;" but they must remember that their diplomas as members of the Massachusetts Homœopathic Medical Society read "*ob accuratam Medicinæ et Chirurgiæ Scientiam, insignem peritiam Rationis Similia Similibus Curantur.*" The Latin is their own; they may decide for themselves whether it alludes to any dogma or not.

The Sentence.—The following was transmitted last Saturday, to the seven homœopathic members of the Massachusetts Medical Society, lately on trial; it differs from the copy in the newspapers, which latter contains a clause interpolated and involving a falsehood:—

The undersigned having been appointed a board of trial for the purpose of trying William Bushnell, Milton Fuller, H. L. H. Hoffendahl, George Russell, I. T. Talbot, David Thayer, Benjamin H. West, upon the foregoing charges and specifications, met the several parties charged on the 29th day of April, A.D. 1873, and by adjournment, on the days between said 29th of April and the date hereof, and heard the evidence adduced in support of said charges, and heard the said several defendants, all of whom were personally present, and their evidence, averments and arguments in answer to said charges and specifications, and the parties having been fully heard and the evidence and arguments on each side fully considered, we do find and determine that the said charges and specifications are all fully proved against each of said accused persons, and they are severally guilty of the charges aforesaid; and we thereupon adjudge and determine that the said William Bushnell, Milton Fuller, H. L. H. Hoffendahl, George Russell, I. T. Talbot, David Thayer, Benjamin H. West, be therefore expelled from their membership of the Massachusetts Medical Society, and report this our determination to the Massachusetts Medical Society at its annual meeting, for such action thereupon as to the society may seem fit.

(Signed) Jeremiah Spofford,
Augustus Torrey,
George Hayward,
Frederick Winsor,
Being a majority of the board of trial.

May 19, 1873.

LOCAL EMPLOYMENT OF CHLORATE OF POTASH IN CANCEROUS SORES.—Dr. Burow, of Königsberg, advocates the employment of chlorate of potash in the treatment of cancerous sores. His proceeding consists in sprinkling the sore with chlorate of potash in powder or crystals, and covering the whole with a wet compress. As the crystals exert a more powerful action than the powder, and excite greater pain, Dr. Burow uses the powder first, and replaces it by the crystals when the sensibility has been abated. One of the cases was a cancerous sore of the left arm, which healed completely after eight weeks' treatment. Three other cases were cancerous sores of the breast; one was lost sight of, the other two are under treatment, and healing well. The fifth case recorded was connected with a cancer which originated in the periosteum of the upper jaw and cheek bone, and then became ulcerated; in this case healing was completed in three months.—*Lancet*, April 12, 1873.

Correspondence.

[From an Occasional Correspondent.]

NEW YORK, May 9th, 1873.

I HAD been reading Boswell's Johnson in my "retirement at Boston, beautiful Boston," and stirred by the story of that venerable man's excursion to the Hebrides, I announced to my wife at the breakfast table my determination to travel. She inquired my reasons for going, and whither I would go. Taking up my Johnson, I read to her what that sage said about Radcliffe's Travelling Fellowships. "It is wonderful how little good Radcliffe's Travelling Fellowships have done. I know of nothing imported by them, yet many additions to our medical knowledge might be got in foreign countries. Inoculation, for instance, has saved more lives than war destroyed, and the cures performed by the Peruvian bark are innumerable. But it is vain to send our travelling physicians to France, Italy or Germany, for all that is known there is known here. I'd send them out of Christendom. I'd send them among barbarous nations." These, said I, are my reasons, and I will go to—New York. "Does not this determination," I continued, still quoting from Boswell, "show great nobleness of resolution in penetrating into distant regions?" My wife, also it seems well up in Johnson, instantly replied, "That, sir, is not to the present purpose. We are talking of sense. A fighting cock has nobleness of resolution." This was a knock-down blow, but I rallied in good order, and entrenched myself behind the dictum of the Doctor when Boswell said he believed "that if he had not children he should go to see the Wall of China." "Sir," said the philosopher, "by so doing you would raise your children to eminence. There would be a lustre reflected on them from your spirit and curiosity. They would at all times be regarded as the children of the man who had gone to view the Wall of China." My wife succumbed at this, and said if I thought the children would hereafter be known as the children of the doctor who went to New York, she would give her consent and pack my bag at once!

My few patients were visited and warned of my intended absence, one and all gladly giving consent, a few cheering me on with the remark that they had no doubt they should do just as well as if I staid at home. My last prescription to the *elders* was pipes and tobacco, but the younger people I earnestly advised, if any of them suffered from a small, feeble, irregular pulse, or headache, flushed face, bleeding from the nose or palpitation of the heart, to buy the new book so favorably noticed in the JOURNAL, and take a dose of from ten to twenty drops of any of the following tinctures (which, like Jessop's candy, are of all flavors, this also being one of the distinguishing characteristics of the book itself), viz., belladonna, aconite or nux vomica. These have indeed been for a long time known as remedies for unrequited love, only the dose has not commonly been so small as is now recommended. Nevertheless, I believe the efficacy will be found to increase with the dose, and, indeed, I have known each of them to effect an entire cure, the party never knowing trouble afterwards.

I then kissed my wife and children, bidding them, as they valued *their* lives and *my* blessing, to take no medicine during my absence, but to trust to "Nature in Disease," and departed by the Fall River line, consoling the pangs of leave-taking by another dose from Johnson, to the effect that "that man is little to be envied whose surgery would not gain force" at Bellevue, "or whose love for anatomy would not grow warmer among the ruins" of the New York University, opposite. I here find it necessary, like Artemus Ward, to "call round and explain" that this joke applies not to the building, but to the Faculty.

My journey was marked by no great event. The ventilation of my stateroom seemed to be a deliberate insult to Dr. Derby. Off Point Judith I coincided with the Ursa Major in thinking that a ship was indeed "a prison, with a chance of being drowned."

The morning light found me in the metropolis, and, taking a street car, I was speedily set down at the ——— Hotel, for I had heard that Dickens had stopped there. After an attentive scrutiny of the size of a slice of roast beef in the restaurant, together with the price put down in the bill, I thought I found an explanation of the early death of that eminent novelist. It must have been starvation or bankruptcy. Studious men were said to spend their lives amid the shades of Vauxhall in settling the questions of how thin a slice of beef could be cut, and how much water a glass of port-wine negus could be made to bear. These experiments are still pursued with unflagging zeal in New York hotel restaurants!

With a mind clear, from the emptiness of my stomach, for Boston fees do not suffice to buy much from the flesh-pots of New York, I took my way to Bellevue. Arrived in the spacious lecture room, I again thought with the "ponderous lexicographer" that "to abstract my mind from all local emotions would be impossible if endeavored, and foolish if it were possible," for what did I see? The seats cushioned! Here, said I to myself, is evidence that the world moves; I felt that I had made a mistake. I had not got out of Christendom. I remembered with shame the bare seats of our Boston College. I recollected with pain the "callosities on the nates of our students," which a long course of air-cushions is needed to remove. Here, beneath the glutei maximi given by God that man might sit thereon and admire the works of his creation, are placed cushions so soft that no one can complain that *his* rose leaves are crumpled. It is my misfortune, not my fault, to be in New York at the season when the singing birds and the voice of the turtle is heard, but not the medical professor, so I turned away from the hall which seems haunted by the voices of the eloquent men who have spoken there. No echo, alas! is heard of the voice once among the sweetest and most persuasive—that of Prof. Elliot.

The dissecting-room is above. Here, again, is fresh evidence for Radcliffe's Fellows; I am in Christendom. The great, wide, long, well-ventilated, beautifully painted room, furnished with every convenience is evidence of the fact. Of generous height, too, is the room. To look about among the pillars reminds one of the lines of Congreve's Mourning Bride. I miss the kindly face of Dr. Moseley, the former Demonstrator of Anatomy, whose talent for lecturing as he dissected was unequalled by anything I have ever seen.

The Museum, in the building, collected by the industry and liberality of J. R. Wood, M.D., who is, I believe, the Emeritus Professor of Surgery, is well worthy of careful inspection. It is to be wished that it was more worthily lodged.

Let us cross the street to the University. Still more evidence in the lecture room of attention to the comfort of listeners to medical and surgical truths that come mended from the professors' tongues.

Up again to the room for practical anatomy, where Prof. Darling mingles the apple-dumplings and toothsome morsels of the ancient and modern classics with the dry details of anatomy. Here, in moments of relaxation, one listens to much gay discourse. His story of "Bang went saxpence" will dwell long in your correspondent's memory.

Nothing redounds more to the usefulness of schools and hospitals than a plentiful and *cheap* supply of anatomical material, and just here New York has no superior in the world. Let us in Boston use every effort to place before and welcome students to all the material that can possibly be had, and at the least expense. With the new methods of preserving or embalming, even the summer need not be wasted. The private collection of osteology made by Prof. Darling's untiring, thrifty industry is very rich in both rare and common specimens, which last, in large numbers, are even the most valuable. What Prof. Darling has accomplished is a lesson for us all. Even in our little dissecting room a very valuable collection might be made by patient labor which would not disdain to employ an odd fifteen minutes in macerating and scraping bones. The Professor's array of specimens of arthritis is, I think, unequalled in this country. Should he resign his chair in New York, it would be a fortunate thing to purchase the museum for Boston.

If the collection be almost unique, the Professor is equally so. A profound anatomist, a *thorough* scholar, deeply read in the best English, Scotch and Irish poets, he is, to your correspondent, a continual study, as Mrs. Pipchin was to little Paul. While lecturing with ardor on some abstruse anatomical theme, quotations from Blair's Grave, Young's Night Thoughts, &c., fly hurtling round; or, an attitude is struck, and we hear Johnson's letter to Chesterfield given with a delightful emphasis, making one wish the old Dr. himself back from the grave to applaud the just intonation. If Garrick was caught tripping in emphasis in the sentence "Lead us not into temptation," I doubt not Prof. Darling could give it correctly.

But outside, the bell is ringing for the steamer *Bellevue* to start for Blackwell's Island, carrying the physicians and surgeons who are to make the daily visit there, and also those students who desire to add to their stock of knowledge such information as may be gathered in the immense field there offered to them. What an enormous place, filled with cases that a great city alone can furnish! As a place for the study of syphilitic disease, this institution is the Lourcine and Midi combined. Fortunate the student who may have gained an *internat* within.

The surgeons are a cheery, genial lot. Here we have the philosophic Hewitt, the keenly intelligent Mason, the courtly Lee, and the practical Wood, who, Napoleon-like, has commanded in twenty pitched battles, in surgery.

If it be true that the study of syphilis comprehends that of all pathology, no better opportunity could be found in Europe than here, if one thing was not lacking. With all this wealth of material, one cannot but a feel a deep regret that it is not utilized by regular clinical courses thrown open to the entire profession, these to be illustrated by cases taken directly from the wards. The whole profession waits for such an opportunity to study this most important and mysterious of diseases.

If the sin of omitting to turn one talent into ten, lies at the door of New York, the greater one of hiding the talent in a napkin belongs to Boston. Deer Island is practically closed to medical men. Why couldn't we have a steamer running regularly to and fro, with time enough to make a good, long visit?

We must not forget, while in New York, to give three cheers, with a tiger if you like, to the *New York Journal of Syphilography*, which is giving us such good things from those really profitable French monographs and brochures. It begins to be seen here that the French devotion to the clinic is the true basis of all that is profitable for the healing of the nations.

Medical Miscellany.

THE editors of the JOURNAL are very much mortified that they are unable to give to their readers, the Report on Venereal Diseases, which should have appeared in this number.

AFTER a meal of starch very little sugar is found in the stomach, according to Brucke, though sugar is readily formed by the action of the saliva on starch. Sugar always occurs in the small intestines.

MAN in the rudest pre-historic times was a draughtsman; and did the carvings on the mammoth tusks found in the caves of the troglodytes—Professor Owen says so.

GUARANA is coming more and more into use in England as a remedy for sick-headache. A convenient form of its prescription is found to be the tincture.

THE PRACTITIONER (London) fulfils its promise and comes to us in the number for May, enlarged by the addition of a considerable department for the consideration of questions pertaining to public health and preventive medicine. The subjects treated of in the present issue, in this new part, are Sanitary Organization in England, Sewage Irrigation, Propagation of typhoid by milk, and International Hygiene in relation to Plague and Cholera.

THE *British Medical Association*, according to the list recently published, numbers 4183 members, at home and abroad.

The *Massachusetts Medical Society* has on its catalogue, published last year, the names of 1240 ordinary members.

A CASE OF POISONING.—Sixteen persons were poisoned in a town, in England, recently, by eating pork-brawn, a preparation corresponding to what is known as "souse" in this country, and consisting of the ears, feet and some of the flesh of pigs, boiled for a long time, with salt and spices. The symptoms in the cases affected were those of irritant poisoning, and they continued twenty-four hours. None of the cases resulted fatally. Chemical search was made for the presence of the mineral poisons in the food, but none were found. The mode of preparation of the food, the character of the boiler in which it was cooked, and the health of the animal before slaughtering were inquired into with only negative results. The maker and seller were above suspicion of the offence of intentional poisoning.

HOSPITALS FOR INCURABLES are being established in considerable numbers in England. H. R. H. Prince Leopold laid the foundation of a new national asylum of this kind near Oxford, recently. Such hospitals are greatly needed in this country, and with them, another English institution which has met with great favor there,—homes for convalescents.

AT the annual meeting of the Middlesex North District Medical Society, held in Lowell, April 30, 1873, the following officers were elected:—

President.—Levi Howard.
Vice-President.—Daniel P. Gage.
Secretary.—Abner W. Buttrick.
Treasurer.—N. B. Edwards.
Librarian.—George H. Pillsbury.
Commissioner on Trials.—John O. Green.
Standing Committee.—W. H. Leighton, Charles Dutton, H. J. Smith.
Councillors.—Gilman Kimball, John W. Graves, Joel Spalding, F. C. Plunkett, John H. Gilman, Charles A. Savory, Nathan Allen, Levi Howard.
Censors.—Franklin Nickerson, George Munroe, Lorenzo S. Fox, Charles B. Sanders, Cyrus M. Fisk.

THERE are many devices adopted by municipalities for the control and diminution of syphilitic diseases. Registration, licensing, inspection, have been each and all tried, with varied results. It is whispered that in Louisville a new and altogether original plan is to be adopted. This consists in practically regarding syphilis as an eruptive disease, and sending all syphilitics to the Eruptive Hospital, where, with the patients suffering from variola, varioloid, &c., they may not only be subjected to medical treatment, and, consequently, take the chances of life and death, but, by the operation of this novel penal code (far more ingenious and terrible than that of Draco), they may be induced to abandon the errors of their ways. The Staff of the Eruptive Hospital are thus made queer, if not fit missionaries, to convert the wicked from their iniquities, and the Eruptive Hospital, like Luther, becomes thus an eloquent agent in the cause of reformation.—*Richmond and Louisville Medical Journal.*

ABORTION MONGERS.—Such is the impunity with which this practice is carried on in Stamboul, that a pharmacien absolutely has for his sign the representation of a fœtus complete. A practitioner accused of this crime advocated in his defence the fact that he himself had invented an instrument for procuring abortion easily and satisfactorily.

DR. BEAUGRAND says that, notwithstanding the various anxieties which beset the career of medical men, mental alienation is rare among them; and he cites, in support of this statement, the following table from the work of Parchappe :—

Artists . . .	9.60	per cent.
Lawyers . .	8.41	do.
Clergymen . . .	4.15	do.
Medical men . .	3.85	do.

NOTES AND QUERIES.

THE *Massachusetts Medical Society* has had another trial since that of the Homœopaths. Where were the reporters ? The accused, it appears, did not call upon them, probably not wishing charges of misdeeds to be flaunted before the public. Therein he acted wisely. What about newspaper ENTERPRISE.

MORTALITY IN MASSACHUSETTS.—*Deaths in seventeen Cities and Towns for the week ending May* 17, 1873.

Boston, 134—Charlestown, 16—Holyoke, 7—Fall River, 26—Lowell, 25—Chelsea, 7—Haverhill, 6,—Newburyport, 5—Lynn, 16—Worcester, 18—Cambridge, 15—Fitchburg, 5—Springfield, 6—Salem, 11—Milford, 3—Somerville, 7—Taunton, 12. Total, 319.

Prevalent Diseases.—Consumption, 65—pneumonia, 24—cerebro-spinal disease, 22—scarlatina, 11.

Cerebro-spinal disease caused deaths as follows :—Boston eight, Cambridge three, Taunton three, Lowell two, and Chelsea, Haverhill, Lynn, Worcester, Springfield and Salem one each. Deaths from smallpox occurred as follows: In Boston two, and in Charlestown and Worcester one each.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, May 24th, 124. Males, 66 ; females, 58. Accident, 4—apoplexy, 2—inflammation of bowels, 1—disease of bowels, 1—disease of bladder, 1—bronchitis, 3—inflammation of the brain, 2—disease of the brain, 8—burned, 1—cancer, 3—cerebro-spinal meningitis, 6—consumption, 15—convulsions, 6—croup, 2—debility, 3—diarrhœa, 1—dropsy, 2—dropsy of the brain, 3—drowned, 2—diphtheria, 1—epilepsy, 1—erysipelas, 4—scarlet fever, 6—typhoid fever, 2—gastritis, 1—disease of the heart, 3—hæmorrhage, 2—disease of the kidneys, 5—congestion of the lungs, 1—inflammation of the lungs, 4—malignant disease of stomach, 1—old age, 2—paralysis, 5—pleurisy, 2—premature birth, 4—peritonitis, 1—puerperal disease, 2—pyæmia, 1—syphilis, 1—tetanus, 1—tabes mesenterica, 3—whooping cough, 1—unknown, 3.

Under 5 years of age, 44—between 5 and 20 years, 13—between 20 and 40 years, 24—between 40 and 60 years, 30—over 60 years, 13. Born in the United States, 85—Ireland, 25—other places, 14.

THE

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Original Communications.

TREATMENT OF EMPYEMA BY PERMANENT OPENINGS IN THE CHEST.

By John G. Blake, M.D.

[Read before the Boston Society for Medical Observation.]

The following cases illustrate so forcibly the good results attending permanent openings in the chest, in empyema, that I deem it a duty to report them, trusting that others may be induced to do likewise under similar circumstances.

Case I.—S. B., aged 15, errand boy, of delicate constitution, though enjoying fair health, took cold four months ago, and in a few days well marked symptoms of pleuro-pneumonia developed, involving almost the entire right lung. He was treated on what is known as the "supporting" plan, stimulants and nutritive drinks being administered in moderate quantities. The case did not improve and, at the end of a month, the boy's condition was worse than at the beginning. To be sure the acute symptoms had subsided, but there remained a chronic debility, with quite frequent cough, and copious expectoration of a purulent character. He began now to lose flesh and have profuse night sweats, and quite marked dyspnœa, with increase of purulent expectoration and more frequent cough, particularly at night. Percussion and auscultation of the chest gave dulness and absence of respiration over the entire right side of the thorax as high as the middle of the scapula. For the next two weeks there was but little change, except that he became gradually weaker and began to have œdema of the face and feet. Examination of his urine showed the presence of a small amount of albumen.

Having exhausted the resources of medical treatment, I requested Dr. Knight to see him, in consultation, to consider the propriety and chances of success of opening the chest. The result of Dr. K.'s examination was that there was air as well as fluid, probably pus, in the cavity of the pleura, and communication between the bronchial tubes and the purulent collection. There could be no reasonable doubt that the pus which the boy was at this time expectorating in large quantities (amounting to a quart in the twenty-four hours, and sometimes, in a single fit of coughing, filling an ordinary spit-cup holding half a pint), came through an opening in the lung from the pleural cavity. Succussion produced the most distinct metallic tinkling that I have ever heard; the splash of the pus against the walls of the chest, and the tinkling resulting from the dropping of the fluid from the walls or the compressed lung, being clearly audible. The boy's condition seemed very unfavorable to Dr. Knight, and while not opposing an operation, he did not favor it.

The following day, feeling that his only chance for life depended on the operation, I opened the chest, with the assistance of Dr. M. F. Gavin, two inches below the inferior angle of the right scapula and a little to the outside. Three pints of pus, slightly fetid, with a peculiar acid odor, came away. A large sized trocar was used, and the opening afterwards enlarged by means of an ordinary scalpel and director, without the aid of anæsthetics. The operation of enlarging occupied but a few seconds, and, considering the boy's enfeebled condition, was borne with great fortitude.

A piece of gum elastic catheter, properly secured, was left in the wound to prevent healing and kept the pleural cavity constantly drained. A stream of warm water was poured into the thorax and repeated until it came away quite clear. The patient had a comfortable night, with the assistance of an opiate. The next morning and evening the warm water washing was repeated. Finding the catheter rather inconvenient, I had a silver canula made, resembling a tracheotomy tube, except that it was straight and fastened with a piece of elastic tape around the body; the free external opening connected with a large sponge to absorb the discharge. This answered well for a time, but as soon as the boy began to move about, the unyielding nature of the material caused pain on inspiration, and after a few days it was removed. The patient's mother soon learned to introduce it, and during the remainder of the treatment, did so twice daily. Meanwhile, whenever he coughed, pus came through the opening, and there was no chance for any considerable amount to accumulate. From the time of the operation, the boy's condition began to improve; the cough and expectoration diminished steadily, the œdema disappeared from the face and feet, the appetite and strength returned, and in six weeks from the date of the operation all discharge had ceased and the opening was allowed to close. At the present time, his condition is better than before his illness, and, his mother tells me, than for many years past. When last examined by me, respiration seemed about equally good on both sides of the chest, and the expansion of the affected side seemed to be complete.

Case II.—For the following I am indebted to my friend, Dr. Gavin, whom I assisted at the operation.

H. K., aged about 28, always healthy, no hereditary tendency to tuberculosis. Four days previous to my first visit, he was seized with acute pain in the right side, great difficulty of breathing, cough and but little expectoration. When I saw him, the respiration was quick and attended with slight dyspnœa, hot skin, pulse over 100. Examination of the chest revealed pleurisy of the right side with effusion enough to half fill the right pleural cavity. Morphine to alleviate pain, expectorant mixture for cough, together with digitalis and squills were prescribed; afterwards the right side of the chest was painted with a strong solution of iodine. No relief followed. The patient continued to grow worse, the dyspnœa becoming very severe, obliging him to lie in a semi-recumbent posture. I recommended the operation of paracentesis thoracis, but he declined to have it done, and then (July 1st) changed physicians. I learned that he was afterwards treated with cod liver oil, tonics and stimulants.

Sept. 3d, saw the patient again. He was very much reduced in flesh; had night sweats; frequent cough with purulent expectoration, very profuse and offensive; pulse weak and about 140. Examination of lungs showed absence of respiration on right side, with flatness on percussion over back and front extending to the clavicle. Crackling was distinctly audible under the clavicle. Intercostal spaces filled out. Great dyspnœa on the slightest exertion.

Sept. 11th, having given his consent to an operation, patient was placed in a chair and an incision made two inches long, at a point corresponding to the angle of right scapula, about two inches below and extending obliquely downwards. A large trocar was now plunged into the chest, followed by the discharge of over sixty ounces of very offensive pus. The breathing at once became easy and less frequent. The chest was washed out with warm water, and the canula allowed to remain in. Patient spent a good night; cough not nearly so troublesome, but he complained of soreness from pressure of canula, which was accordingly removed and replaced by a large gum elastic catheter, tied so as not to slip out. This was allowed to remain in three days, when it was withdrawn and not again introduced.

For two weeks the chest was washed out twice a day, by means of a Davidson syringe, with warm water and occasionally a weak solution of chlorinated soda. Tonics and stimulants were freely used.

Improvement followed immediately on the operation and continued steadily until health was completely restored. The chest wound remained open for 35 days. The lung expanded slowly, expectoration ceased, and when last seen, about eight months ago, the man was working at his trade, and, to use his own words, "never felt better." Examination of the chest showed vesicular breathing over the whole of right side, but less pure than over the left.

Dr. Blake assisted at the operation, and can testify to the fetid character of the pus expectorated and its identity with that removed by the operation. The odor was as bad as is found in gangrene of the lung, and indeed suggested that at first; and the quantity precluded the possibility of any other source than the pleural cavity.

Case III.—Mrs. C., mother of four children, living in a dark and damp court in South Boston, was attacked with symptoms of pleurisy of the right side after exposure to wet and cold. She was treated by four or five physicians successively, without relief. I saw her four weeks from the commencement of her illness. At my first visit, she was sitting up in bed, breathing quickly, evidently in great distress, with blue lips and anxious expression of countenance. An examination of the chest showed the cicatrices of several large blisters, some of them not yet quite healed. Percussion and auscultation revealed flatness and absence of respiration over entire right side of the thorax front and back. The intercostal spaces were obliterated, and the whole side seemed rounded and fuller than the left. The necessity for surgical interference was obvious and urgent, and the patient at once acceded to my proposal to remove the fluid. Having obtained an aspirator I proceeded, without assistance other than the woman's husband contributed, to operate. The trocar was introduced about two and one-half inches below the inferior angle of the scapula, and my surprise was great to find that, instead of serum, I was removing pus. The short period of the existence of the disease seemed to preclude the possibility of the fluid being of this character. I continued to remove it until the coughing became so annoying that the patient was growing quite distressed. The quantity withdrawn amounted to sixty-eight ounces.

Believing that a permanent opening would be required in order to effect a cure, I admitted her to my ward in the City Hospital, and ten days after the first operation made the necessary opening, in the presence and with the assistance of the hospital house officers, removing at that time a quart of pus. The after treatment consisted in washing out the pleural cavity twice daily for three weeks, once daily during the fourth week, and every second or third day from that time until the discharge ceased, generally using simple warm water, and occasionally a carbolic acid solution of a grain or two to the ounce.

The woman's condition improved steadily from the time of the operation; the cough ceased in a few days, and in a week she was out of bed and could move about the ward. She was discharged from the hospital eight weeks from the day she entered, and is now quite well.

CASE IV.—A. P., shop-girl, aged 23, entered City Hospital March 11, 1873. Parents died of phthisis. She had some dyspeptic ailments for about six years. Two years ago she had "pneumonia," and a few months after, "chills and fever," which lasted most all summer.

Last fall she had an attack of "pleurisy," affecting the left side, which confined her to bed nine weeks, and from this she thought she had never fully recovered, as there had always been more or less pain in the left side and dyspnœa after that time.

About February 1st, she had a chill, followed by an increase of pain in the side and dyspnœa; cough with free, whitish, frothy expectoration and profuse night sweats. On entrance to hospital, six weeks after the attack, she was able to sit up most of the time, and while in bed assumed an inclined position. Symptoms as just described.

Physical examination of chest showed no marked change on the right side. The left side was evidently enlarged and the intercostal spaces obliterated. Percussion and auscultation gave flatness and absence of respiration from base nearly to apex, where bronchial respiration was heard. The heart was displaced to the right. On March 16th, paracentesis thoracis was performed. A trocar was introduced between the eighth and ninth ribs below the angle of the left scapula and eleven pints of pus withdrawn. Immediately after the operation, the opening was enlarged without the aid of an anæsthetic. A gum elastic catheter was introduced and the pleural cavity washed out with warm water. The catheter was retained and the washing repeated twice a day. The patient expressed great relief from the operation, and improvement continued steadily until the morning of March 21st. At my morning visit, I found her in a state of collapse, from which she was with great difficulty partially roused. She sank away again and died in two days. The causes, we afterwards ascertained, were entirely disconnected with the operation or the disease.

In the discussion which followed the reading of this paper, Dr. J. J. Putnam said that Prof. Traube (Berlin) considered that one fifth of all cases of empyema recovered by the pus being evacuated through the lungs.

Dr. H. I. Bowditch highly approved of Dr. Blake's fearless method of operating in these cases. He thought it was wrong to allow a patient to cough up a secretion which could be allowed to escape so easily. Those cases where the matter is allowed to be expectorated are, as a rule, long and tedious. The operation, on the other hand, tends greatly to hasten convalescence, and, though his experience of incision has been small, Dr. Bowditch believed that it could be done with less danger to the patient than to allow him to continue coughing without making an opening. Dr. Bowditch would urge an incision just as we would open an abcess in the thigh. After using the aspirator on one or perhaps two occasions, in order to make sure of the existence of pus and of its tendency to re-accumulate, a free opening should be made, and no half way measures in regard to the establishment of such openings should be adopted. In one case which he had seen, the very happiest results had followed a three inch incision.

In cases of pleurisy, there are occasional attacks of orthopnœa or dyspnœa, lasting perhaps fifteen minutes, which are followed by an interval of perfect relief. The dulness is found to extend only half way up the chest, and the examiner thinks there is less fluid than really exists. In these cases, sudden death from orthopnœa may at any moment occur, and therefore in all such cases an operation should be immediately performed by aspirator or incision.

Dr. Knight said that Traube operated as soon as the inflammation subsided, which was indicated by the want of tenderness on pressure in the intercostal spaces. Oppolzer lays it down as an imperative rule to operate immediately, if one has to deal with a case of pneumo-hydrothorax. Thrombosis seems a more reasonable explanation of the sudden death which sometimes occurs in these cases than to ascribe it to a sudden increase in the amount of the fluid.

Clinical Lecture.

COLLES'S FRACTURE.

A Clinical Lecture, delivered at the Massachusetts General Hospital, by
R. M. Hodges, M.D.

Fracture of the lower extremity of the radius, commonly known as "Colles's Fracture," is of frequent occurrence; were it not so, such a number of patients could hardly have been gathered to illustrate a single lecture. It is caused, almost invariably, by a fall on the palm of the hand, the weight of the body being thrown upon the radius, which breaks at its weakest part, viz., where the compact shaft of the bone ends in the cancellated extremity, and at a point never more than an inch from its articulation with the carpus. The displacement of the portion broken follows the direction of the resistance, the lower fragment of the radius and the carpus which is carried with it causing a manifest deformity on the back of the wrist. As the lower fragment rarely, either wholly or in part, rides past the upper, but is rather bent or crushed backwards, the solid, tubular shaft is driven into the cancellated tissue, and an impacted fracture is produced. On the palmar aspect a prominence is developed just above the wrist by the angular flexion of the bone just alluded to. These changes of contour give to the hand and arm a shape, when viewed in profile, which, from a fancied similitude, is frequently spoken of as the "silver fork deformity."

In addition to this posterior displacement, the carpal fragment is usually carried toward the radial border of the arm, the hand, of course, following it; and this more readily happens if the line of fracture is oblique, instead of being transverse, as is usually the case. The styloid process of the ulna is thus made to project in a way which might, erroneously, suggest its dislocation. The styloid process of the radius is naturally longer than that of the ulna, but by this change of position they are brought nearly or quite on a line with each other, and the altered relation of these two processes becomes a point of diagnostic interest. The ulna is not often involved in the fracture, but the ligament which unites it to the radius is sometimes torn from its attachments, giving rise to pain at the radio-ulnar articulation, which is almost characteristic of the injury.

The position of the limb at the moment of the accident, the muscular contraction by which it is accompanied, and the individual peculiarities of the bone involved, modify the severity of the injury; but the cause, the locality, the direction of the fracture, the deformity, and the impaction, are in all cases wonderfully uniform, varying in degree only, and chiefly as regards impaction. The cases here present verify this statement.

The "silver fork deformity," and the change in the relative position of the styloid processes of the ulna and radius, which betray the existence of a fracture, can ordinarily be detected by the eye, without touching the injured limb, but are sometimes masked by swelling and œdema, which give the wrist a cylindrical shape; while the prominence on the palmar aspect is occasionally only recognizable by a deep crease between the palm of the hand and the forearm. It is an unusual thing for the signs of this fracture to be so obscured as to leave any uncertainty in the diagnosis. The subsidence of swelling is not to be looked to for dispelling obscurity. It is apt to be very persistent, and the mere fact of a general swelling in this region is in itself evidence of a fracture.

Patients are apt to think if the movements of the wrist-joint are retained and they can flex their fingers, which is often the case, that no bone is broken. Supination is, however, invariably impaired. The hand pronates perfectly, and it is the position of pronation which the injured limb instinctively assumes, but on supinating it, pain is provoked so soon as the thumb is uppermost. This is explained by the injury of the pronator quadratus muscle, always caused by the fracture, and which reveals itself when the fibres are extended in rotating the radius.

Dislocation of the wrist is of such rare occurrence that it does not complicate the question of diagnosis. It is easier to mistake the injury for a sprain. The fracture being impacted, the head of the radius still rotates at the elbow, and crepitus is not common. Ligaments, the tendons and tendinous sheaths with which the bone at this point of fracture is surrounded, also unite the interlocking fragments.

It occasionally happens that the impacted bones cannot be disengaged, or the amount of force requisite to accomplish it is such as to render persistence in the attempt unadvisable. Some say that in old women no effort should be made to effect this; and others assert that the fracture reduces itself if the arm is properly "put up." When there is a strong lateral displacement towards the radial border of the arm, with a prominent styloid process of the ulna, the deformity is apt to be permanent, as these features imply deep impaction and a firm dove-tailing of the bones.

To obtain reduction, extension should be made from the hand, or from the thumb alone, if there is lateral displacement, while counter-extension is made from the elbow. The surgeon then presses and kneads the fragments into place. By forcibly flexing the hand, the extensor tendons may be made to aid in pressing the fracture into position.

A great many splints have been devised for the treatment of this injury; but at the present time there is a belief that it does not require elaborate apparatus. Among all that have been proposed, there is none of more general usefulness than what is called in this Hospital "a spoon splint"—a straight splint, carved to fit the dorsal aspect of the arm and hand. It extends from the elbow to the ends of the fingers, and is accompanied by an inside splint, shorter, but reaching from near the elbow to the middle of the palm. These should be as broad, or broader, than the arm, and are best padded with towels. Any provision, either in the splint or the padding, intended to wedge apart and maintain the interval between the radius and ulna is useless. There is no interval at the point where this fracture occurs. The splints should be adjusted without previous bandaging of the arm, and held in place by tapes or inch-wide strips of adhesive plaster. A roller bandage is then applied, and if the tapes or adhesive strips have been properly secured, this should not be put on too firmly. Tight bandaging is a cause of synovitis in the sheaths of the tendons.

A pistol-shaped splint is occasionally used when there is much lateral displacement of the hand, but its efficiency in correcting this deformity is not very great.

Four to six weeks, according to the age of the patient, should be allowed for the wearing of splints, and the bandages should be changed as seldom as possible. If swelling and pain persist, the splints should be continued even longer than the time first named. In this Hospital, most of us believe that passive motion, so long as pain and tenderness remain, only aggravates the condition it is designed to remedy.

The articular inflammation which is frequently set up by the proximity of the injury, or by actual implication of the joint, is a source of stiffness which is sometimes unjustly charged to mismanagement by the surgeon.* An adhesive inflammation of the sheaths of the tendons is another and perhaps more frequent cause of stiffness. The rigid and deformed wrist and fingers which may follow skilful treatment must be anticipated by any one who takes upon himself the care of this fracture, and advanced age in the patient adds to this liability. Mere deformity, however, does not interfere with the ultimate usefulness of the limb. Pains should be taken at the outset to forewarn those interested of these possible and often wholly unavoidable contingencies.

Prolonged bathing of the hand and wrist in warm water, and gentle friction with an inelegant but very useful liniment, composed of equal parts of lime-water and linseed oil, will do more to limber and soften the fingers and wrist than any passive motion, however unrelenting. It should be remembered that the flexor tendons of the fingers, both superficial and deep, run in one synovial sheath, and that any attempt to remedy stiffness in their movements can be accomplished more readily by flexing each finger separately, than by bending them all together, as is frequently done. If there is persistent pain, which unfortunately often happens, even the motion produced by rubbing is best omitted until irritation has subsided. Any violence that excites inflammation is prejudicial.

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* Suits for malpractice are not so often brought for fractures in the vicinity of the wrist as for those in the neighborhood of the elbow-joint, mainly because errors of diagnosis and unsatisfactory results are not as common in the former.

The complainant, in a case of alleged maltreatment of the fracture under consideration, usually attempts to prove either that the injury was not diagnosticated; that the proper splints, as regards material, length, width, and shape, were not used; that the arm was bandaged beneath the splints; that the bandages were too tight; that they were not changed often enough; that improper padding was used (e. g., cotton wool); that passive motion was not practised, or not practised early enough; that too long an interval was allowed to elapse between the surgeon's visits; or that attendance ceased too soon. A claim is also sometimes made for loss of time, and unnecessary pain endured, which different treatment, or more attention, would have prevented.

Disagreement may exist among the best surgeons as to the details of proper treatment in each case; but responsibility ceases when the errors of the surgeon cannot be distinguished from the errors and doubts of an inexact science. No surgeon should be condemned for a doubtful, or even a probable, undemonstrable fault.

Inexperience is unquestionably a prolific source of inefficient, if not bad treatment. A diploma establishes a presumption in favor of the knowledge, experience and aptitude of a physician, without creating in his favor a privilege of irresponsibility from which the public might suffer.

Progress in Medicine.

REPORT ON DERMATOLOGY.*

By James C. White, M.D.

General Literature.

Skin Diseases: their Description, Pathology, Diagnosis and Treatment. By Tilbury Fox, M.D. London. Third Edition, re-written and enlarged. With a Cutaneous Pharmacopœia, a Glossarial Index, and sixty-seven additional Illustrations. London: Henry Renshaw. 1873. Pp. 532.

This is quite a different book from the American edition, so well known, of Fox on Skin Diseases; one which fails by a little only of reaching the high standard of excellence the author hopes he has attained, in producing a work which may be looked upon as containing "the latest, fullest, and best practical information of any book on the subject." It does not contain quite the latest information, for in Neumann's last edition, below noticed, will be found recorded many an observation of recent date not to be found in Fox; nor the fullest information, for compared with the great work of Professor Hebra, now so near conclusion under the admirable collaboration of Kaposi, it sinks in many parts almost into insignificance in this respect. Although dedicated to Erasmus Wilson, "the acknowledged head of dermatologists," a position which few out of England, certainly not all in England will admit, Dr. Fox pays the higher compliment to the modern German school of dermatology by imitating or adopting largely the most distinctive feature of its literature. On turning his pages rapidly, so many familiar plates and full descriptions of the minute anatomy of the skin in health and disease attract our attention, that it seems as if we had before us a translation or compilation of the writings of recent German dermatologists. The names of Auspitz, Biesiadecki, Rindfleisch, Kohn and Neumann meet the eye everywhere. This is said in no spirit of detraction, quite the reverse. It is pleasant to see the labors of such men appreciated, and the medical literature of other countries enriched by their observations. Were the results of such honest yet simple investigations of workers generally substituted for the empty theorizing of writers, our books on skin diseases would be much reduced in size, but greatly increased in value. Our author even, although expressing his gratification at this philosophic spirit of the modern German school and drawing so largely upon its treasures, cannot forbear guessing still about the causation and nature of many diseases, and suiting his therapeutics at times to his theories. In urticaria, for instance, Dr. Fox criticizes the unsatisfactory brevity, or "thoroughly German fashion," as he calls it, with which some writers of that nation speak of treatment, and goes on at length to say that among other measures he "prevents the circulation of effete products, urea, uric acid, controls all kinds of disorder which may be reflected on to the skin, and lastly tones up and lulls by anodynes the nerve paresis." After much like this, without telling how he does it, he says: "I find urticaria one of the most difficult and unsatisfactory of all diseases to cure." Isn't the honest German confession of ignorance better than this roundabout way of arriving at the same conclusion? Those who have had the largest experience in the treatment of this affection would find a small space ample, we think, for the mention of the remedies which really exert any control over it.

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* Second semi-annual Report.

The author, in the beginning, gives thirteen rules to be observed in studying skin diseases, which we quote in the following summary: "Not to confound *stages* with *varieties* of disease, but to constitute varieties on the ground of differences in the general characters of *diseases as a whole;* to distinguish between accidentals and essentials, so as to recognize the proper nature of mere secondary complications and occurrences; to look upon mere surface alterations as indicative of, and dependent upon, changes in the deeper parts; to try and ascertain the primary seat of disease as regards nerve, blood, or tissue, for therapeutic reasons; to note if an eruption possesses characters which are permanent, transient or varying; to observe if an eruption be uniform or multiform; &c." The diseases are grouped under ten classes: 1. Eruptions of the acute specific diseases. 2. Local inflammations (erythematous, catarrhal, plastic, bullous, suppurative, squamous). 3. Diathetic (strumous, leprous, syphilitic). 4. Hypertrophic and Atrophic. 5. New Formations. 6. Hæmorrhages. 7. Neuroses. 8. Pigmentary Alterations. 9. Parasitic Diseases. 10. Diseases of the glands and appendages.

There are but few of the individual affections to which especial reference will be made, those only of particular interest through novelty or doubtful character. Of Impetigo contagiosa he says:—"I could detect fungus elements in the crusts, but not in the fluid contained in the vesico-pustule before this bursts. . . . . . The whole character and course of the disease, with its febrile disturbance, its vesico-pustular aspect, the definite course of each vesico-pustule like that of an herpetic vesicle, and the like, are utterly unlike those of a parasitic disease. The disease is certainly not parasitic, and I think my opinion on the point is of some little value, since of all dermatologists I am perhaps the one most firmly wedded to the conviction that parasitic growths are potent producers of mischief." In this connection, it may be well that Dr. Fox should be heard on the question as to his ability to distinguish the fungus nature of the appearances found in some cases of Alopecia areata, or Tinea decalvans, which has been raised by some of my friends in this country. He says:—"Now I am quite ready to admit that this parasitic disease is not common, far from it, and that the majority of cases of circumscribed baldness observed in the head are not parasitic at all. But I cannot but state that I have found fungus elements without doubt, and so have others at University College. And I must here at once emphatically deny that what I have described as a fungus is nothing, more or less, as suggested by my friend Dr. Duhring, of Philadelphia, than broken up sebum."

Dr. Fox describes two forms of disease which he considers new, and calls them fibroma fungoides and dysidrosis. The former differs from ordinary fibroma molluscum, according to his observation, by its tendency to ulcerate, to rapid growth, and to vascularity. It is hardly entitled to the position of a new variety.

Dysidrosis, he considers, bears the same relation to the sweat follicles as does acne to the sebaceous follicles. The follicles, he says, are much distended, and the retention of the sweat and the distention of the follicles are followed, secondarily, by congestion of the sweat follicles, by the formation of bullæ, maceration of the epidermis, and, it may be, more or less dermatitis. He says the disease is commonly regarded as an eczema; we think justly so. It is probably far more common in our country of intense heats than in England, and although it arises from over-activity of the sweat glands and consequent local hyperæmia of the tissues immediately surrounding them, it is rapidly converted, under a continuance of the exciting cause, in our judgment, into an ordinary and true eczematous inflammation of the skin. We fail to see why this affection deserves a separate position and a distinct title more than any other of the many varieties of eczema produced by specific exciting causes.

The descriptions of the diseases are mainly clear and strong throughout the book, but the latter portion bears marks of hurry or fatigue in its preparation, acne receiving only five pages, and affections of the hair and hæmorrhagic diseases but two each. The plates illustrating the anatomical changes in the skin are good, though less distinct than the German originals. They add vastly to the value of the work. As we said in the beginning, the book is not quite all the author claims it to be, but it is a thoroughly good book, fairly the best as yet complete in our language.

Scheme for obtaining a better Knowledge of the Endemic Skin Diseases of India. Prepared by Drs. Fox and Farquhar. London. 1872.

This is a government publication of large size, illustrated with plates and engravings, issued by the India Office for distribution among the British Colonies of India.

Two main objects, its authors say, are proposed:—1. To obtain and then to circulate a better knowledge of the more important endemic skin diseases of India, or such as principally attack the skin; and thereby, 2. To bring about an agreement between the profession in India and England as to the nomenclature, the typical character, the varieties, and the causes of the diseases in question. The following heads indicate the kind and extent of information sought:—

a. The accurate observation of cases, especially with reference to the exact mode of origin of disease.

b. The microscopic characters of morbid products.

c. Precise information, inasmuch as climatic influences have much to do with the genesis of disease in India, touching the name and character of particular localities in which particular diseases prevail, with exact statements as to the nature and alliances of those diseases. [Situated as medical men are in India, in such varying climates and among such different races, acted upon by such a variety of circumstances as to food and clothing, &c., they might gather valuable information about the geography of diseases of the skin. It is notorious that sharp lines seem to cut some diseases off from different parts of the country. This is the case as regards severe forms of itch, leprosy, Madura foot, Delhi sores, &c.]

d. The nature and peculiarities of the food and water supply of the affected population.

e. The tribes or castes in which particular diseases occur, and the habits of these tribes, ex. migratory or otherwise. [The influences of certain religious practices, such as that of covering the body with ashes and other earths, as followed by fakeers and religious mendicants, deserves notice.]

f. The occupation of the attacked.

g. The dress of the attacked, especially with regard to the exposed or unexposed nature of the seats of disease. [It is an interesting question, for example, to determine whether the diseases of the scalp are more frequently developed in races that cut short their hair and shave their head, or among those who keep their hair long. Many of the Hindoos shave all or the most of their scalp, head, arm-pits, &c. The Mahommedans, as a rule, cut the hair close. The whole Seikh race never allows a razor or scissors to touch a hair. Many millions of Indians go about bareheaded; others wear only skull caps; others wear great masses of cloth like table-cloths on their heads. The influences of these practices on disease it is important to know.]

h. The observed differences between diseases as seen in the darker races of the East and in Europeans, and the differences in the same disease as observed in India and in Europe.

j. The connection between season and disease. [Where the variety of climate is so great as in India, the observation of this point might lead to important results.]

The following are the diseases to which it is thought desirable that attention should be directed:—

1. Morphœa.
2. Scleroderma.
3. Frambœsia.
4. Delhi sore.
5. Keloid.
6. Fibroma.
7. The Elephant leg, or Elephantiasis Arabum, or tropical big leg.
8. The Fungus foot of India, or Madura foot.
9. The true Leprosy, or Elephantiasis Græcorum.
10. Leucoderma.
11. Pityriasis versicolor in unusual forms.
12. Burmese ringworm.
13. Malabar itch.
14. Lichen tropicus, or prickly heat.

A clear and brief description is then given of these diseases, which comprises the latest information we possess upon all points concerning them; the points to be cleared up are then mentioned, and a list of questions are suggested for replies for each disease specially. All this matter, of course, is destined to convey as well as elicit much information; it is, in fact, an admirable report upon some of the least understood affections of the skin. Fortunately for those who cannot obtain a copy of this publication, the portions of most general interest may be found in the new edition of Dr. Fox's work on skin diseases above noticed. We are informed by him that he is getting good returns already, and his final report will be awaited with great interest.

Lehrbuch der Hautkrankheiten. Von Dr. ISIDOR NEUMANN. Wien. 1873. Pp. 567.

This is the third edition of Neumann's book on skin diseases. The first appeared in 1869, the second in 1870. A translation of the latter, by Dr. Bulkley, of New York, was published by Appleton & Co. early in 1872, and has become familiar to students as a valuable text book. The work has also been translated into the Russian, Polish, and Italian languages. This universal popularity has been dependent, to a great extent, no doubt, upon a feature which has distinguished it from all other works on skin diseases, for it had originally striking defects. It represented in a concise form the most advanced knowledge of the new school of dermatology, the results of the labors of recent observers upon the minute anatomy of the skin in health and disease, and gave admirable pictures of the microscopic appearances in illustration of their researches. As a practical text book, however, it was of unequal merit, its therapeutics and clinical descriptions of some of the affections being very bald.

The author seems to have been aware of these important deficiencies, for in the present edition he has filled up most of these gaps, and rounded out many chapters, which were presented before merely in skeleton form. The new matter amounts to 160 pages. He gives up the modification of Hebra's classification, adopted in his last edition, and returns to the original system, altered only by calling the fourth class "inflammatory" instead of "exudative," and by the omission of the tenth class, the "ulcerations." This he calls a simplification of Hebra's system. A new chapter on general pathology is given, but the additions will be found mainly in the chapters on Xanthelasma, Zoster, Pemphigus, Prurigo, Purpura, Scleroderma, Lupus, Cutaneous Syphilis, Leprosy, and Favus. The whole book, however, has evidently been revised with care, and gives us the very latest observations of students of dermatology from all parts of the world, which are worth recording.

From this new matter we present only a single selection. In connection with the frequency and seat of eczema, the author states that among 29,535 cases (not including exanthemata) of skin diseases received at the Vienna General Hospital during thirteen years, eczema occurred 2,195 times. The parts affected were as follows:—

Extrem. super.	429
" infer.	378
Eczema faciei	338
" capillitii	291
Truncus et extremitates	182
Eczema universale	179
Eczema trunci	97
Truncus et scrotum	76
Eczema capillitii et faciei	59
" genitalium	40
" mammæ	33
Truncus et nates	29
Eczema ad anum	28
" capillit. et extrem. superior.	10
" " " " " et inferior.	9
" axillare	8
" fossæ poplit.	7
" auricul.	3
" plicæ cub.	2

Eczema nasi	2
" colli	2
	2195

There has been added, also, a very full general index, and one also of all the authors and observers whose investigations are referred to in the text. In its present form it may justly be considered the best work on skin disease already completed, both for student and physician.

The Pathology and Treatment of Diseases of the Skin. By J. L. Milton, Surgeon to John's Hospital for Diseases of the Skin, &c. London. 1872. Pp. 378.

This work, as the author states in his preface, is devoted almost solely to treatment, and it is mainly in this respect, as an epitome of the views of English writers on the therapeutics of these affections, for its range is scarcely wider, that it is to be judged. Nominally, there stands at the head of each chapter or section only a brief definition of the various diseases and the divisions made of them by writers, but in some few notable instances this introduction to their therapy expands into a considerable treatise, and it is in these portions that the author's most peculiar and individual views are apparent. The book is especially English, insular in its theories, in its prejudices, in its practice. It begins with the adoption of Willanism as its system of arrangement, and constantly breaks away from its impossible lines; it very seriously discusses whether such an observer as Hebra has not all his life been mistaking cases of phtheiriasis and badly-treated scabies for what he calls prurigo; and with regard to what it chooses to look upon as still a question, the parasitic nature of the growth in tineæ, it pronounces that "the victory practically remains with the antagonists of the parasitic doctrine, and that there is not one jot of evidence to show that any form of tinea necessarily depends on the transplantation of a fungus." How vain after such decision are the recent and elaborate investigations of our most accomplished mykologists and dermatologists with regard to the relations of these growths to common moulds and the beginnings of vegetable life.

It is evident that the author is a peculiar man. Perhaps some might be disposed to think, as his mind seems incapable of receiving intelligence in certain directions, that his book could contain no information worth giving. Such an inference, however, would not be wholly right. The author is no teacher for the student or for the physician little acquainted with the literature or nature of skin diseases, for they could not distinguish between the absurd exhibitions of ignorance and prejudice in which the work abounds and its more reasonable doctrines.*

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* I may be excused for alluding to a somewhat personal matter in this connection, as it allows one of the other parties his "last word" with American readers. In vol. iii. of Wilson's *Journal of Cutaneous Medicine*, Dr. Milton claimed to have anticipated Hebra in the promulgation of the doctrine that eczema is not necessarily a vesicular disease, which claim was quoted in an article by Dr. Swift in the *American Journal of Dermatology and Syphilis* in 1870. This statement was "attacked in a very intemperate letter by Dr. White," according to our author, which was published, with some peculiar editorial comments, in the latter journal. Without reference to the personalities it developed, the letter showed that the claim of priority brought forward by Milton was not correct. In the volume under notice, he introduces the matter at length, and here are the "last words" for those who may not see the book. Speaking of Dr. White's "attack," he says:—"It was receiv-

He goes much farther now, and announces his belief that "true eczema is not vesicular at any period of its course," regarding what is generally looked upon as the vesicular stage of the affection as a herpes; a belief concerning which (as to priority of conception) there will scarcely be any rival claim hereafter.

It would be possible to give a fair representation of all the author's peculiar views only by quoting them generally, for which we have no space. He fully believes in the superior efficacy of internal remedies in the treatment of skin diseases, and the four means upon which he mainly relies are laxatives, iron, arsenic and mercury. An effort is made, also, to give the methods of treatment of all other writers, but as his acquaintance with the works of the dermatologists of various countries seems to be very unequal, this part of the book, although quite full, is very unsatisfactory.

Anatomy and Physiology.

De l'Epiderme et des Epithéliums. Par le Dr. L. H. Farabeuf. Paris: G. Masson. 1872. Pp. 290.

The first fifty pages of this handsome volume are devoted to a consideration of the anatomy and physiology of epithelium in general; the last fifty, only to that of the outer skin or epidermis. Although it contains, in the latter part at least, little if any original matter, it is quite a fair and full *résumé* of the views of real observers. The development and regeneration of dermal epithelium have attracted the attention of so many students of late, and they are so intimately connected with many important questions in pathological histology, that any one volume which collects the results of the recent investigations in this field is a desirable addition to our literature.

The Mechanics of the Skin.—Prof. Tomsa, of Kiew, contributes to the January Heft of the *Archiv für Derm. und Syph.* a long and very elaborate article on the mechanics of the cutaneous structure and their influence over the capillary system of the skin. The action of the muscles and various elastic tissues of the cutis he illustrates, according to his interpretation, by an ingenious artificial model, which can be explained only by reference to the accompanying plate. He recognizes an especial capillary distribution for the cutaneous organs of secretion, for the motive apparatus of the skin, for its innervation, for the sheaths of its arteries, and for its fat. The article possesses but little interest for the general reader, and to present a comprehensive abstract of it in this place is impossible.

Absorption of Fluids by the Skin.—Röhrig. (*Arch. d. Heilkunde* and *Archiv für Derm. und Syph.*, Erstes Heft, 1873.)—After contact of the hand with turpentine until a feeling of strong burning was expe-

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ed in another quarter with an amount of approbation which must have gone far to console him for the snubbing he got at home. The Editor of the *Archiv. fur Derm. und Syph.* says (1870, p. 656) "he took no notice, at the time it was mooted in the American journal, of such a claim, evincing as it did the grossest ignorance of literature, because he felt sure that the journal would soon find out the mistake it had made. The Editor winds up by saying that he has been too indulgent in the matter, and that Dr. White's strong expressions were only called forth by a feeling of honest indignation at Dr. Swift's strange attempt." After further comment upon the subject, our author says, with regard to Hebra's views:—"I fear the medical profession in England must be enveloped in the same charge" of ignorance, and adds:—"I fear, too, that exclusive of Hebra's pupils, the bulk of medical men, not only in England, but in other countries, and even in great part of Germany itself, were in the same state of gross ignorance." In spite, however, of this remarkable statement, he frankly withdraws all claim to priority of publication, which, he says, "undoubtedly belongs to Hebra."

rienced, ten minutes, care being taken that the oil could gain entrance to the body in no other way, Röhrig found that his urine, passed immediately, possessed an evident odor of violets, as well as of camphor, when this substance was employed instead of turpentine. Other experiments showed that when finely pulverized fluids, like solution of iodide of potassium, curarin, digitalin, &c., acted under a certain pressure upon the skin of the arm, in the course of from twenty minutes to two hours, a passage of the substances into the body could be determined by their appearance in the secretions or by their physiological effect.

(To be concluded.)

Reports of Medical Societies.

SELECTIONS FROM THE RECORDS OF THE OBSTETRICAL SOCIETY OF BOSTON.

W. L. RICHARDSON, M.D., SECRETARY.

JANUARY.—*Puerperal Eclampsia.*—Dr. MINOT reported the case. The patient, a young married lady, 24 years old, had always enjoyed good health, and was stout and hardy. She had some slight pains in the afternoon of January 2d. At 4, A.M., of the 3d, the waters broke. The os was then slightly open and the pains very moderate. There was very little progress during the day. Towards evening the pulse began to rise, and at 6½ o'clock, P.M., it was at 120. The os was then slightly nicked at two opposite points, after which it dilated rapidly. The forceps were applied, and a living male child was delivered without difficulty at 7½, P.M. The pulse continued rapid, but there was no other unfavorable symptom till 9 o'clock, when a convulsion took place, lasting several minutes, and followed by stertorous breathing. Ether was administered by inhalation, and consciousness returned. At midnight there was another fit. Ether was administered as before, a pint of blood was taken from the arm, and a fourth of a grain of morphia was injected under the skin. Consciousness again returned, but at 3 o'clock, A.M., a third and last convulsion occurred, less violent and shorter than the others.

Before applying the forceps, the bladder was emptied by the catheter, and it was noticed that the urine was very smoky, but it was thrown away before being further examined. During the day, another specimen was obtained, by catheter, which contained a moderate amount of albumen, a few transparent casts and a great abundance of uric acid crystals.

It was afterwards learned, on inquiry, that the patient had complained of a "crowded" feeling in the head, some days before her confinement, and that the feet and ankles had been swollen. She was now freely purged with jalap and cream of tartar, and did well. The urine, on the 8th, was of sp. gr. 1030, contained considerable albumen, great quantities of blood and pus corpuscles, epithelial cells (vaginal), compound granule cells, and fine granular matter; but no casts, and no crystals of uric acid. The urine throughout was rather deficient in quantity.

Dr. M. was led to bleed the patient, from the congested appearance of the face; the long continuance of the stertor after the convulsions;

the fact that very little blood was lost at the time of delivery; and the smoky appearance of the urine, indicating the presence of blood, probably due to congestion of the kidneys, as was subsequently confirmed by the microscope. The treatment seems to have been beneficial; at any rate, it seems to have done no harm.

MARCH.—*Acute Eczema, improperly attributed to Vaccination.*—Dr. ABBOT reported the following cases. Some eighteen months ago, a lady was delivered of a healthy female child, and subsequently went to a neighboring city to spend the summer. While there the baby was vaccinated. Just before the vesicle became ripe, an eruption began to show itself, which soon developed into an acute eczema of the face, head and neck. Abscesses of various sizes formed on the back of the head and neck, continuing in succession some three months, reducing the child to the lowest stage of emaciation. The disease was, of course, ascribed by the parents to the vaccination. During the next summer, the mother returned to the same city, with a second baby, which remained unvaccinated. At the end of the third month, however, at about the age when the first child was seized, the second infant broke out with acute eczema exactly as the first had done, the disease being even more severe than in the first case. The child became greatly emaciated, and finally died of cholera infantum.

The source of the eczema was, for a long time, a mystery to the parents, both of whom denied ever having had any skin disease. Influenced by popular theory, they were strongly inclined to ascribe the disease, in the first child, to bad vaccine virus. The mystery was cleared up during the winter following the attack of the first child, when the mother, being then pregnant with her second, had a slight eruption of eczema about her fingers; the first appearance, she declared, of any such eruption on her skin. The case is instructive, as demonstrating, in this instance at least, the fallacy of the popular belief that vaccination is capable of communicating anything but vaccine disease.

Scarlet Fever.—Dr. BORLAND reported the case. A lady was confined recently with her first child. She did well until the fourth day, when she had a chill. The next day, the eruption of scarlet fever appeared on both mother and child, and was very abundant. The mother's milk became greatly lessened in quantity. The fever ran its usual course, the milk returning as convalescence came on. Both mother and child made good recoveries.

Dr. MINOT said that, last fall, he was called to see a woman who had been seized with typhoid fever while acting as wet-nurse. During the course of the fever, the milk almost entirely disappeared. At the end of three or four weeks, however, the milk returned, and she has since nursed the child as well as before the fever.

Erysipelas.—Dr. TUCK reported the following case. A woman was recently confined at the Boston Lying-in Hospital, while suffering from an attack of facial erysipelas. She had had the disease for fourteen days before her entrance, and the acute symptoms had passed off. The sixth day after her delivery, the baby, which seemed very feeble at birth, was attacked with facial erysipelas, and died in twenty-four hours. The mother had no milk. Soon after the death of the baby, the mother was transferred to the Massachusetts General Hospital, where she rapidly recovered, and was soon able to be about the wards.

A second attack of erysipelas, however, supervened, from which she is now slowly recovering.

April.—*Two Cases of supposed Tubal Pregnancy.*—Dr. Wellington gave the following account of the cases.

Mrs. C., aged 35, has for a long time been a chronic invalid. She was married five years ago, but has had no children. Two years since, she missed two menstrual periods, and afterwards had considerable flowing; whether there was an abortion or not, is uncertain.

March 17, 1873, she had a sudden attack of very severe pain in the lower part of the abdomen, on going down stairs in the morning. This pain was a little to the left of the median line. She had missed one menstrual period, which was due three weeks before. Soon after the access of the pain, she commenced vomiting, and became very faint. At 6, P.M., when I first saw her, in consultation with her physician, Dr. Wood, she was in a state of collapse, and had been so for some time. The vomiting continued; she could retain nothing upon her stomach. She was faint, and, at times, pulseless; the extremities were cold, and covered with a clammy sweat. There was pain and tenderness in lower part of abdomen, chiefly on the left side, with dulness and fulness in the dependent part. Per vaginam, the uterus was found to be low down, and slightly tender. For a day or two previously, she had had slight flowing, with membranous shreds, which continued. She looked as though she would die very soon. During the night she rallied, the pulse improved, the faintness diminished, and there was less vomiting. The abdominal fulness, dulness, and pain continued.

From this time she gradually improved, but not continuously. At times, the vomiting returned, and was troublesome. Once there was dysuria, and the urine was reported to be bloody. Both dysuria and bloody urine soon ceased suddenly.

She is now convalescent. When last seen, a spot of fulness and dulness was clearly made out in left iliac region, though less marked than formerly; this spot was a little tender. She had recovered, in a good degree, her appetite and strength, and was able to walk and to take out-door exercise.

Last September, I saw a case similar to the above, in consultation with Dr. Webber. The two cases were so much alike that nearly the same description will apply to both.

A married woman, who had passed one menstrual period, was suddenly seized, while sitting in her husband's office, with a very acute pain in the lower part of the abdomen. This was followed by vomiting, slight diarrhœa and collapse. She had a series of fainting turns; the pulse became rapid and feeble, and, at times, could not be counted at the wrist. There was but a single sound of the heart; the extremities were cold, and she appeared like a person dying. Her mental faculties were unimpaired. There was tenderness and fulness in lower part of abdomen, and dulness on percussion, indicating an effusion of some kind into the peritoneal cavity. Two days after, there was a slight bloody discharge from the uterus.

Her subsequent history was similar to that already described. She rallied from her collapse, gradually improved, and in the course of two or three months was well. She has since menstruated regularly.

In both these cases there was evidently internal hæmorrhage, probably into the peritoneal cavity. Was the cause tubal pregnancy, with rupture of the tube? If so, the fact of two cases of this sort occurring in the experience of one physician, within six months of each other, and neither of them proving fatal, is a remarkable one.

Case of United Twins; Rupture of the Uterus.—Dr. Minot said he had been called, Dec. 4th, by Dr. J. F. Jarvis, to see a poor woman in North Grove Street, in her second labor, which began twenty-four hours previously. The pains became active about midnight, when the midwife in attendance finding the feet in the vagina, sent for Dr. Jarvis, who discovered that it was a case of twins. Not being able with all his efforts to deliver the first child, he sent for Dr. Minot. It was discovered that the children were united by their abdomens. After great difficulty a hook was got into the mouth of the presenting child, and the head was drawn down. On account of the exhausted condition of the woman, the band of union was then severed, and the first child was removed. The second child was then easily extracted by the feet. On searching for the placenta, it was found that there was a rent, about four inches in length, completely through the walls of the uterus, on the right side, at the juncture of the body with the neck. The union of the twins was immediate, about three inches in length, between the umbilicus and the sternum. There was but one cord. The woman died two hours after delivery. She got three drachms of fluid extract of ergot before Dr. Minot saw her. The children were both females, of large size, their united weight being about fifteen pounds.

Bibliographical Notices.

Clinical Lectures on various Important Diseases: being a Collection of the Clinical Lectures delivered in the Medical Wards of Mercy Hospital, Chicago. By Nathan S. Davis, A.M., M.D., Professor of Principles and Practice of Medicine and Clinical Medicine in Chicago Medical College. Edited by Frank H. Davis, M.D. Chicago: J. J. Spalding & Co. 1873. Pp. 262.

This little book seems to be a collection of clinical observations, rather than lectures, made at the bedside of the patient. The subjects treated of include the various forms of fever, typhoid and typhus (which do not seem to be clearly distinguished from each other by the author), intermittent, rheumatic; the summer complaints of children; diseases of the lungs, of the bowels; cerebral and spinal affections, and some others.

As clinical illustrations of different forms of disease, these lectures have some merit. They are evidently written by a man of considerable observation and wide experience. For this reason all that relates to treatment is entitled to consideration; although the variety of medicines employed is a little startling to one accustomed to the more cautious use of drugs which obtains among the better class of practitioners in this part of the country. In the treatment of continued fever, Dr. Davis is no friend to purgation. He says:—"I think I have never known a case of typhoid or typhus fever in which active cathartics or purgatives were used in the early stage, that did not run a protracted or dangerous course." To combat the diarrhœa, he relies upon oil of turpentine combined with laudanum; this, he thinks, "not only exerts a peculiar action on the mucous surface of the intestine, by which the tone and contractility of the capillaries is increased, and the accumulation of blood consequently diminished, but it also increases the activity of the whole capillary vascular system." As to stimulants, nearly thirty years of careful observation at the bedside of the sick has satisfied him that strychnia is a far more reliable remedy for sustaining the nervous functions, in the typhoid prostration, than alcohol. He gives it in the dose of one-sixteenth of a grain, in solution with a few drops of nitric acid. Dr. Davis can say nothing, also, in favor of the use of alcoholic remedies in phthisis. "I have carefully watched their influence in connection with this disease for the last ten years. They have proved worse than useless in counteracting the tuberculous diathesis, or preventing the deposit. In the active suppurating stage of the disease, their free use will sometimes retard the emaciation, lessen the cough, and give a decided appearance of improvement, but it is in appearance only, for in most of such cases while the disease of the lungs is apparently retarded, the retention of carbon in the blood hastens a fatty degeneration of the liver and kidneys, and developes dropsical effusions and albuminous urine." And these observations were confirmed by a written record of all cases of phthisis which came under his observation during five years, in which alcohol was used either as medicine or otherwise.

One of the best lectures in the book is that on cerebro-spinal meningitis, in which Dr. Davis seems to have had much experience. He has been "unable to gather any evidences of the contagiousness or communicability of the disease." He believes the *Calabar bean* to be a most valuable remedy in this disease, having more apparent effect in controlling the disease than any other remedies he has tried. He says he was led to employ it on account of its apparent success in tetanus, and because he had used it with benefit in several cases of muscular rigidity from irritation of the nervous centres. He employs a tincture of the bean, in combination with the fluid extract of ergot. He does not inform us what is the strength of the tincture, but it evidently differs from that of Dr. Fraser, since the dose for a child, eleven years old, is about twelve drops.

The pathology and physiology taught in these lectures are quite behind the age, and we regret that in this respect the book is connected with so distinguished a name as that of Dr. Davis. We cannot find any evidence that he employs the thermometer—certainly he does not teach his pupils the great value of this instrument in the study and treatment of disease. The subject of the pathology of renal diseases is hardly alluded to, even in the course of remarks on a case of scarlatina, with dropsy and albuminous urine. It is needless to say that the treatment of subjects connected with the physiology and pathology of the brain and spinal marrow is far from what it should be in a work on clinical medicine.

We cannot avoid calling attention to the barbarous way in which the formulæ for prescriptions are written. Some are in English, a few in Latin, but most of them are in a jargon which is neither the one nor the other. There is no objection whatever to writing prescriptions in English, if one is so inclined; but if the Latin tongue be employed, let it be at least grammatically correct, and if (as seems to be the case here) the writer is unacquainted with the language, let him get a copy of Dr. Pereira's Physician's Prescription Book, and copy from that.

In conclusion, while we regret that Dr. Davis's lectures should be unworthy, in some respects, of their author, we can recommend the book as containing much valuable instruction.

A Treatise on Apoplexy, Cerebral Hæmorrhage, Cerebral Embolism, Cerebral Gout, Cerebral Rheumatism, and Epidemic Cerebro-spinal Meningitis. By John A. Lidell, A.M., M.D., Ex-Professor of Anatomy, &c. &c. New York: Wm. Wood & Co. 1873. Pp. 395.

This work suggests rather a series of monographs, elaborated from the study of a large number of cases occurring mainly under the eye of the author, and great weight is laid upon the *post-mortem* appearances found. Extensive selections from the literature of the subjects treated add to the value of the work, though in this respect brochures seem to have given place to text-books; in consequence, the views advanced will be the more familiar to the majority of the readers, and will all the sooner become antiquated.

Very justly, the vague use of the term apoplexy is referred to, and, at the same time, it is retained as indicative of a clinical condition. Under such circumstances, the exclusion of those forms resulting from trauma, poison and heat might be regarded as arbitrary, especially as the two latter causes so often seem connected with the so-called congestive forms.

In referring to the frequency of the disease cerebral apoplexy, the New York sanitary reports are quoted. From such figures really no valuable information can be obtained as to the diseases producing apoplectic symptoms, any more than one can judge that this, that, or the other alteration exists in a thousand cases of stomach-ache. The author compromises, however, by the use of the adjective terms congestive, serous, hæmorrhagic, embolic and nervous, suggesting, to a certain degree, the existing pathological conditions, in connection with which the apoplectic symptoms are produced. Apoplectic hæmorrhage and hæmorrhagic apoplexy practically mean one and the same thing, the individual bias placing in the foreground the symptom or the lesion.

In the pathogeny of apoplexy, the author has put in a strong light the German view that the symptoms are the direct result of a diminished supply of blood to the nervous elements. Dr. Lidell advocates the popular view of the apoplectic habitus, in opposition to his favorite author, Niemeyer, and the collateral evidence obtained from Abercrombie, Rokitansky, &c.

Most readers will be disposed to question the unconditional acceptation of the well known fact (?) that blood corpuscles cannot pass through the lungs till their carbonic acid has been replaced by oxygen, and that, such a change not taking place, the blood must stagnate in the lungs so long as the heart beats.

The theoretical explanation of the physical conditions occurring in hæmorrhagic infarction will need remodelling since the publication of Cohnheim's observations.

The closing chapter, on Epidemic Cerebro-spinal Meningitis, contains much to interest the reader, especially in this vicinity, where the disease is at present so rife.

The treatise may be recommended as a book of reference, and as such will undoubtedly find a place on many shelves.

BOOKS AND PAMPHLETS RECEIVED.

Mineral Springs of North America; How to reach and how to use them. By J. J. Moorman, M.D. Philadelphia: J. B. Lippincott & Co. 1873. Pp. 294. (For sale by James Campbell.)

Practical Histology in Vienna, and the Microscopical Study of Blood and Epithelium. By James Tyson, M.D. Philadelphia: J. B. Lippincott & Co. 1873. Pp. 34.

The Dependence of Life on Decomposition. By Henry Freke, M.D., T.C.D., &c. Dublin. 1871. Pp. 55.

Lithotomy. By Paul F. Eve, M.D. 1873. Pp. 7. Re-printed from the Richmond and Louisville Medical Journal.

On a new Kind of Solution of Flesh as a Means of Nourishment and Treatment in Diseases of the Stomach. Pp. 8. Re-printed from the Berliner Klinische Wochenschrift.

The Function of the Eustachian Tube, in its Relation to the Renewal and Density of the Air in the Tympanic Cavity and to the Cavity of the Membrana Tympani. By T. F. Rumbold, M.D. St Louis. 1873. Pp. 40.

Handbook for the Physiological Laboratory. By E. Klein, M.D., J. Burdon-Sanderson, M.D., F.R.S., Michael Foster, M.A., M.D., F.R.S., and T. Lander Brunton, M.D., D.Sc. In two Volumes, with one hundred and thirty-three plates. Philadelphia: Lindsay & Blakiston. 1873. Pp. 573. (For sale by A. Williams & Co.)

A Handbook of Medical Electricity. By Herbert Tibbits, M.D., L.R.C.P. With sixty-four Illustrations. Philadelphia: Lindsay & Blakiston. 1873. Pp. 160. (For sale by A. Williams & Co.)

Modified Lithotomy Staff. By Lewis D. Mason, M.D. Brooklyn, L. I. Pp. 3.

Annual Report of the Superintendent and Physician of the N. Y. State Inebriate Asylum for 1872. Albany: 1873.

RUPTURE OF THE ŒSOPHAGUS.—This unusual accident occurred in Alabama, in the case of a healthy young man, aged twenty-two, and is reported by Dr. James S. Bailey, induced, it would appear, by a violent attack of vomiting. For twelve hours before death, it was noticed that, during the attempts to vomit, nothing was brought up, and that full doses of castor oil failed to produce catharsis. Death ensued at the end of twenty-four hours. At the *post mortem*, the thoracic and abdominal organs were found to be healthy, but in the cavity of the chest were found the various fluids swallowed, including the castor oil, which led to the conclusion that the œsophagus had been ruptured. A more minute dissection revealed the seat of this rupture, which proved to be half or three-quarters of an inch in length, and situated an inch above the cardiac orifice of the stomach.—*New York Medical Journal*, May, 1873.

Boston Medical and Surgical Journal.

Boston: Thursday, June 5, 1873.

THE TRIAL AND THE DAILY PRESS.

There can hardly be a doubt that the sentence of the Board of Trial will be enthusiastically supported at the approaching meeting of the Massachusetts Medical Society. The members of the Board and the prosecuting officer deserve well of the Society. Their duty was a disagreeable one, but they performed it conscientiously. Their quiet, dignified and courteous bearing, in marked contrast to the bullying manner, personal attacks and struggle for notoriety of some of the accused, showed clearly to those of us who were present that the honor of the Society was in good hands.

It should have been mentioned last week, that Dr. Green, of Easthampton, was detained from the meeting of the Board of Trial by the sudden and dangerous illness of a patient, whose exigencies required his constant attendance. His absence prevented his signing the sentence then passed, but we are authorized to state that he was fully in accord with his colleagues as to its justice. So, in fact, the Board were unanimous.

We have, of late, been forced to find fault with the unworthy conduct of the Boston daily papers in regard to the trial, and now the New York *Evening Post* devotes itself to discussing what is an honorable physician, and indulges in the following tirade, which we publish for the amusement of our readers:—

> "If this judgment is to be law in medicine, why may not the lines be drawn still straighter, demanding a return to the old practice of emetics and starvation? Why not banish cold water, air and exercise for patients? May we also suggest that it would be well to have a standard measure for doses of medicine, for fear that tender-hearted doctors may treat their patients too homœopathically even in allopathic medicines? While we are about it, let us fix the standard of 'honorable' orthodoxy in doses so acutely that no wretch of a physician who has a mind or a theory of his own can endanger the profession for the sake of his patient. Let us establish the fact beyond doubt that a man who may be cured by an heretical or 'dishonorable' treatment is not cured, although he may live to the age of Methuselah, and that the man who dies under the schedule treatment, by weight and measure, still lives in spite of natural appearances."

The second charge against the members on trial reads:—"That you are guilty of conduct unbecoming and unworthy an honorable physician and *member of the Massachusetts Medical Society,*" the gist of the matter being in the latter part of the sentence, which the *Evening Post* ignores. It is very hard to believe that the management of that journal should be so incompetent as to make such an omission by accident. It is the more inexcusable, as we have repeatedly explained that the question is not of individual opinion nor of private character, but of the morality of breaking the by-laws of the society.

Since writing the above, we are surprised to see that the *Advertiser* claims the right of publishing private affairs in defiance of the wishes of those concerned. In an editorial article of June 2d, entitled "The Recent Medical Trial," we find the following passage :—"The society having no conceivable claim on our silence in a matter of so general public interest, it is unnecessary to explain why its wishes were not deferred to." It is, indeed, quite unnecessary, but we think it would be well to explain under what circumstances a family or a society may be allowed to decide as to the privacy of its own affairs.

THE DESTRUCTIVE FIRE of last Friday, May 30th, came uncomfortably and, for a time, dangerously near the JOURNAL establishment ; we were fortunate, however, in escaping with only the temporary disturbance of removal, and are glad to present the JOURNAL as usual. To have been "between two fires"—and two such fires—is quite enough for one semester. The study of such inflammatory changes and processes does not increase in fascination with the nearness of the subject.

A CASE OF CONGENITAL VARIOLA IN A FŒTUS OF FIVE MONTHS, THE MOTHER RE-VACCINATED, NOT HAVING HAD VARIOLOID. BY PHILIP ADOLPHUS, M.D , Chicago.—Dr. Gilmore requested me to see a woman residing in Polk Street, who had spontaneously aborted a dead fœtus of five months, which, he said, was covered with smallpox pustules. This case came to me under my supervision as a Sanitary Inspector.

Its peculiarity will at once be appreciated when the woman's history is told. Her husband had had a mild attack of varioloid some weeks previously. Dr. Gilmore revaccinated the woman above mentioned, as well as the other members of the family.

The woman remained well for ten or fifteen days, when, without having the slightest trace of varioloid, she aborted, and a dead fœtus of five months made its appearance, covered with pustules.

I examined the woman and the fœtus.

The woman had not the slightest trace of an eruption.

The fœtus presented the following appearances : The disease was of the discrete variety ; perhaps there were about a hundred pustules over the body. Having been kept from the open air and bathed in the amniotic fluid, the pustules were whitish and flattened, and resembled the pustules met with on the mucous membrane of the mouth ; many had the slight pseudo-membranous disk, which covered the pustules, removed on exposed ulcerated surfaces.

This is a case in which the fœtus only had variola before birth, though the mother had not been afflicted with it.

"Some years ago, a woman in the wards of Professor Tonquier was delivered of a dead child, affected with smallpox, although she had herself been vaccinated."

"The illustrious Mauriceau relates that his mother, when in the last stage of her pregnancy, had the misfortune to lose the eldest of her three sons by smallpox, to whom, notwithstanding her condition, she was unceasing in her attentions, and that at his birth, which occurred the day after the death of his eldest brother, he presented four or five pustules of smallpox." (Cazeaux, fol. 566.)

"Ebel, Kesler, Watron, Jenner, Denent, Royer, Bouchut, and Chaigneau, have all seen children born with variola, the mothers being free of the disease. In several of these cases the mothers having been vaccinated were insusceptible to the epidemic influence, yet were able to communicate the virus to the fœtus." (Ibid, fol. 447.)—*Chicago Medical Journal.*

Correspondence.

(*From our Special Correspondent.*)

PHILADELPHIA, May 26th, 1873.

MESSRS. EDITORS,—Scarcely had the words of congratulation and farewell to the graduates of the two prominent schools of medicine in this city died away, before the note of preparation was again heard, and the gates of the University opened to receive the new aspirants for the coveted degree. Formerly, the summer months were devoted, by the few students who stayed in the city, to desultory hospital work, and to private examinations, but a few years ago the sum of $50,000 was given to the University by one of its most honored professors, to found certain new lectureships, the object of which was to supplement the winter course by enlarging the field of study; and as every medical man should be, and of course is, familiar with mineralogy, climatology, botany and other kindred sciences, the spring term was devoted to the mastery of these branches, and, as a glittering bait, the degree of *Ph.D.* was offered at the end of the three months' course. You remember Emerson's description of the college founded in the interior of New York State, in the winter, where they "turned out a batch of graduates before pears were ripe." But things are different now, and clinical lectures, with hospital ward-classes, where the history, diagnosis and treatment of each case is given by the student, and commented on before the class by the lecturer, promise a bed-side knowledge of disease, while the numerous parti-colored announcements of private courses on the eye and ear, skin, nervous diseases, obstetrics, microscope, pathological anatomy, &c., remind one, at least, of the portals of the Vienna Hospital; and the shy and half deprecatory way in which many of those who attend these courses wear their new-got title of doctor, shows that they at least have felt the need of further training than is thought necessary by the schools. But this is only the prelude to greater changes, for we must perforce seek "fresh fields and pastures new," as our time-honored buildings, standing, as you may remember, on historic ground, where Franklin first "eripuit cœlo fulmen," have been sold to the government for the erection of a post-office. The Department of Arts has already taken flight, and now occupies a spacious building in West Philadelphia, in close juxtaposition to which the new medical hall will be built. Impressed with the necessity of illustrative teaching, it was determined to build a hospital attached to the university; six acres of ground were granted by the city for this purpose, while the State had given $200,000 for the construction of the buildings, and an endowment of $350,000 was raised by voluntary contributions. The central building and one pavilion will be completed by next fall, and new pavilions will be added as the need arises, for the plan admits of indefinite extension without injury to the architectural unity of the whole. These buildings are all situated close to the old Philadelphia Hospital (1000 beds), and within a few minutes' walk of the new Pennsylvania Hospital, so that clinical material certainly will not be wanting. Other new hospitals have been lately built by religious denominations, while smaller institutions devoted to the treatment of special diseases multiply so inordinately, that last year 100,000 persons received gratuitous medical advice and treatment.

Audi alteram partem. Last month there appeared in the columns of the *Medical Times* a letter signed "A Struggling Practitioner," in which the increasing difficulties which young men experience in commencing practice were strongly set forth. Many of the recipients of these charities are well able to pay at least a small fee for medical attendance, and it was by practising among this class of patients that young men established a certain reputation and eked out their restricted means. The question of the use and not the abuse of our public charities, which has for some time taxed to the utmost the attention of medical men abroad, is now making itself felt among us, owing to the inclination to establish new charities instead of strengthening those already existing.

The frightful mortality among children during the excessive heat of last summer, was so appalling that excursions on the river and in the Park were organized, by which thousands were taken from the close and filthy alleys, and for a day at least breathed fresh, uncontaminated air and listened to the ripple of the water, or the wind among the trees. This spring, the earnest desire to prevent, if possible, so terrible a death-rate among the children—306 dying in a single week from cholera infantum—has taken form in two distinct attempts. The Obstetrical Society has printed the report of a committee on "the care of children during the hot summer months," with an appendix containing a few brief rules for emergencies, written in plain, homely English. This pamphlet will be distributed in large numbers through all the dispensaries, and will, it is hoped, be of real practical use. Others, realizing the force of an inimitable picture in one of the late numbers of *Punch*, where a poor old crone hesitates to accept a cookery book from a benevolent female, with the remark that "if it's all the same, she would rather have the *ingridiments*," have subscribed $14,000 to build the "Children's Seashore House" on a lot of ground generously given them at Atlantic City. This building is within 500 feet of the sea, and is intended to accommodate about fifty children this summer; but if the demand is greater than expected, a second wing, built but not furnished, will be opened.

After agitating the College of Physicians for over a year, the new fee-bill has been rejected, and this action was followed by the abolition of the one formerly adopted. For years this has been a dead letter, representing neither a maximum nor minimum charge, disregarded by the profession, and having no legal value; hence the attempt to so modify and reconstruct it as to bring it once more into use. Compromises were made, strong debates ensued, and at last we are rid of the entire affair. It shared the fate of all sumptuary measures; the value of services rendered cannot be estimated and defined by artificial enactments, but will and must be regulated by the character of, and demand for, such services.

The occurrence, a few weeks ago, of several rapidly fatal cases of cerebrospinal meningitis among the children in the Philadelphia Hospital and in another benevolent institution, with scattered cases in the city, made us fear the outbreak of another epidemic, such as visited our city in 1867, but the apprehension seems to have been thus far groundless; indeed, were it not for an unusual number of cases of diphtheria, the health of the city would seem to be scarcely affected by the cold, damp weather with which the spring tardily advances.

DOMESTIC PEPSIN.

MESSRS. EDITORS,—I see, in the JOURNAL of May 22, an article on pepsin, by Dr. Hoskins, of Lowell. I think his remarks will do good.

I am using what I call *domestic* pepsin, consisting of the inside of the gizzards of chickens, turkeys, ducks or geese, or the stomachs of calves or little pigs. Dry them on a stove in a plate, and then bruise them, and give a third of a teaspoonful of the powder in syrup a few minutes before eating. Some country people dry the gizzard itself and then grate it, and give that powder in the same way for dyspepsia.

I think this crude, inelegant, *domestic* pepsin far superior to pepsin made from *macerated* pigs' stomachs, and it costs the poor patient next to nothing. I direct the patient to obtain and dry these skins and bruise them.

Portsmouth, N. H. N. L. FOLSOM, M.D.

Medical Miscellany.

"IT is an ill wind which blows nobody good." The late fire destroyed the so-called Gallery of Anatomy.

THE recent attempt in New York to give the late Dr. Wells, of Hartford, the credit of the discovery of anæsthesia has resulted disastrously to its originators. We have contented ourselves, so far, with watching the progress of affairs; next week we will give a review of the matter.

NEW HAMPSHIRE MEDICAL SOCIETY.—The Eighty-Third Annual Meeting will be held in City Hall, in Concord, at 11 o'clock, on Tuesday, June 10, 1873. G. P. CONN, *Secretary.*

YELLOW FEVER IN NEW YORK.—Three vessels had arrived at this port up to May 29th, with yellow fever cases on board, and more infected vessels were expected. The cases of fever were of mild type. The arrangements at quarantine for the reception of infected ships are represented as excellent.

THE *Medical Benevolent Association of France* held its fourteenth annual meeting April 20th and 21st. Its finances are highly prosperous, the society having funded 335,046 francs. The proposition was made by the treasurer to begin granting annuities in 1874, that is, four years sooner than originally intended.

FOR CHAFING OF INFANTS.—Take powdered starch two parts, white oxide of zinc one part. Make a fine, well-mixed powder. Dust the abraded places with the powder, after proper cleansing.

THE *Third International Medical Congress* will be held in Vienna, and hold its sessions from the 2d to the 10th of September. Professor Rokitansky will preside. The language of the congress will be German. The proceedings will be published from day to day; and a summary as soon as possible after its close—in German, French, English, and Italian.

INTERNATIONAL COMPLIMENT.—Last winter Dr. Acland, F.R.S., L.L.D., Regius Professor of Medicine in the University of Oxford, and honorary physician of the Prince of Wales, was elected a member of the American Philosophical Society of New York, and recently a similar compliment was conferred upon him by the Academy of Medicine of that city.

THE following clyster for tenesmus was in great repute with some East Indian practitioners a quarter of a century ago, or more, in tenesmus of dysentery:—

R. Pulv. ipecac., gr. xii.;
Extr. gentian, gr. x.;
Water, ℥iv. M.

SCIATICA.—A case of this disease, which for months had resisted a variety of treatment, but at the time was abandoned to itself, disappeared while the patient was talking with his physician; and did not return. Another case, which in the person of a medical man through a year or more of varying severity had, at last, much reduced the sufferer, and rendered him quite unfit for practice, after an afternoon of intense paroxysms, wholly disappeared in the night following, and never returned. In this case there had not been any application made, nor any medicines taken, from the onset of the disease up to its final departure.

Such are the facts.—What is the solution?

THE following medical declaration concerning alcohol has been published in the *National Temperance Advocate*, over the signatures of Drs. E. Delafield, Willard Parker, Alonzo Clark, E. R. Peaslee, C. R. Agnew, Stephen Smith, A. C. Post, Elisha Harris, E. Eliot, Stephen Rogers, Andrew H. Smith, J. R. Leaming, and other New York physicians:—

"In view of the alarming prevalence and ill effects of intemperance, with which none are so familiar as members of the medical profession, and which have called forth from eminent English physicians the voice of warning to the people of Great Britain concerning the use of alcoholic beverages, we, the undersigned, members of the medical profession of New York and vicinity, unite in the declaration that we believe alcohol should be classed with other powerful drugs; that when prescribed medicinally it should be with conscientious caution and a sense of grave responsibility.

"We are of the opinion that the use of alcoholic liquors as a beverage is productive of a large amount of physical disease; that it entails diseased appetite upon offspring, and that it is the cause of a large percentage of the crime and pauperism of our cities and country.

"We should welcome any judicious and effective legislation—State and national—which should seek to confine the traffic in alcohol to the legitimate purposes of medical and other sciences, art, and mechanism."—*Philadelphia Medical Times.*

MARRIED,—At Hingham, 28th ult., Dr. J. Winthrop Spooner to Miss Marion R. Baker, both of Hingham.

MORTALITY IN MASSACHUSETTS.—*Deaths in seventeen Cities and Towns for the week ending May* 24, 1873.

Boston, 124—Charlestown, 21—Cambridge, 20—Lowell, 15—Worcester, 11—Springfield, 9—Somerville, 7—Fall River, 19—Lynn, 12—Lawrence, 10—Holyoke, 6—Haverhill, 6—Chelsea, 5—Salem, 4—Newburyport, 6—Fitchburg, 3—Milford, 2. Total, 281.

Prevalent Diseases.—Consumption, 42—cerebro-spinal disease, 21—pneumonia, 18—scarlet fever, 7—croup, 6.

The deaths from cerebro-spinal meningitis were as follows:—In Boston 7, Charlestown 3, Cambridge 4, Lowell 2, and in Somerville, Lawrence, Holyoke, Salem and Fitchburg 1 each. Smallpox caused 2 deaths in Holyoke, 1 in Cambridge, and 1 in Worcester.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, May 31st, 128. Males, 72; females, 56. Accident, 10—apoplexy, 3—anæmia, 1—inflammation of bowels, 1—bronchitis, 1—congestion of the brain, 1—disease of the brain, 8—carbuncle, 1—cancer, 2—cerebro-spinal meningitis, 4—consumption, 30—convulsions, 5—debility, 3—dropsy, 1—dropsy of the brain, 2—drowned, 3—dysentery, 3—epilepsy, 2—scarlet fever, 7—gastritis, 1—disease of the heart, 1—hæmorrhage, 1—jaundice, 1—intemperance, 1—disease of the kidneys, 2—inflammation of the lungs, 4—marasmus, 1—old age, 5—ossification of arteries, 1—paralysis, 5—pleurisy, 1—premature birth, 3—peritonitis, 2—puerperal disease, 2—rheumatism, 1—organic stricture of rectum, 1—tabes mesenterica, 6—whooping cough, 2—unknown, 3.

Under 5 years of age, 49—between 5 and 20 years, 11—between 20 and 40 years. 28—between 40 and 60 years, 23—over 60 years, 17. Born in the United States, 87—Ireland, 25—other places, 16.

THE

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Original Communications.

THE INFLUENCE OF HYGIENIC CONDITIONS ON THE MORTALITY OF CITIES.

By Henry O. Marcy, M.D. Harv.

Read at the Annual Meeting of the Middlesex South District Medical Society.

Statistical information is to be regarded as of great value, and certain questions may be settled by such aid, which could in no other way be answered.

Last autumn, when the periodical excitement over the slaughtering establishment of John P. Squires and the Miller River nuisance was at high tide, believing that the surroundings complained of, and the entire absence of sanitary care and precaution in whole neighboring districts must increase the mortality rates (although, as may seem strange, it was a question over which medical gentlemen practising in these localities had different opinions), Dr. A. L. Norris, of East Cambridge, and myself, were induced to carefully examine the records, and the following table of facts was then presented, which I have felt are of sufficient interest to our profession to offer them here to your notice.

The period of time under observation is five years, commencing August, 1867, and ending August, 1872.

The basis of population is taken from the census of 1870, which (given a uniform increase in the population for five years) would afford a nearly mean average in numbers. They are as follows:—

	Population, 1870.	Deaths during five years.	No. of inhab. to one death per an.
Ward I.,	6,909	552	62·66
" II.,	10,389	1,267	41
" III.,	9,178	1,134	40·45
" IV.,	8,865	728	60·90
" V.,	4,311	376	56
City total,	39,652	4,057	48·80

This is an annual mortality of between 20 and 21 to the thousand of inhabitants and differs only a slight fraction from the mortality rates of the County of Middlesex. Ward lines, unfortunately, prove arbitrary divisions, not best arranged for our purpose, but give us the only data of population. Ward III. comprises East Cambridge, and

Ward II. includes the territory lying south and west to Main Street. Perhaps one half of Ward II. may be considered as healthily located as any part of the city, while the hill-top of Ward III., or East Cambridge, is dry, well drained and, except in its surroundings, is unexceptional as regards position.

These two wards contain 19,556 inhabitants, and suffered a loss from death during the five years of 2,401. The remaining portion of the city contains a population of 20,085, and suffered a loss from death during the same period, of 1,656, showing an excess of deaths with one fortieth less population of 745; an excess of over twenty per cent.

Comparing Ward I., known as Harvard Square or Old Cambridge, with Ward III., East Cambridge, the contrast will be seen to be still greater.

No. of inhabitants to one death per annum, 62·66, Ward I.
" " " " " " " 45·45, " III.

an excess of over twenty-two per cent.

A further analysis of the diseases producing death show the diseases to be such as, *a priori*, would have been supposed prevalent in undrained localities with such surroundings.

Whole number of deaths from cholera infantum for five years, in the city, 463. In East Cambridge, comprising about 22 per cent. of the population, 133, or 35 per cent. of the whole number.

Whole number, scarlet fever, 187. In East Cambridge 59, or 33 per cent. Typhoid fever, 172. In East Cambridge 44, or 25 per cent. Diseases of the lungs, 940. In East Cambridge 282, or 30 per cent.

Dr. E. White, of Somerville, who also rendered desirable assistance in the tedious labor of comparing these tables, kindly prepared for me the following exhibit, illustrating much more strongly the contrasts of location and their effect upon disease.

The district under observation is included between Sixth St. on the east, and Windsor on the west; Miller's River on the north, and Charles River south. In the absence of definite knowledge as to the number of inhabitants in this limit, by a careful comparison of the opinions of those best able to judge, the population was supposed to be about 3,000, probably a large estimate. A glance at the map will show almost this entire district to be flat, chiefly marsh originally, and doubtfully in some instances improved by occupation, with very imperfect or no drainage; and in this are situated several immense slaughtering establishments flanked by rendering, bone-boiling and soap-making establishments, to say nothing of other occupations detrimental to the public health. It is doubtful if a worse condition of surroundings could have been found in the vicinity of Boston than along the Somerville line.

It will be remembered that July and August of last year were very sickly months, and the whole number of deaths for this period in Cambridge was 291. The number in the above described district was 55, or over one sixth of the whole number, while this district probably contains less than one fifteenth part of the population of the city. This frightful rate of mortality, continued throughout the year, would reduce the average duration of life within these limits to about *ten years,* while the death rate, continued throughout the year in the remaining portion of the city, would give nearly *forty years,* or almost four times greater in one section than in the remaining portion of the city.

These last tables, as will be seen, are merely speculative, having an estimated basis upon which to draw conclusions, and yet I cannot believe they go wide of the facts, and are probably within the limit of truth.

They are no more difficult to believe than similar statistics, carefully drawn by unprejudiced observers from different sections of other cities. I remember a report made by Dr. Edward H. Clarke, of Boston, some years since, comparing the so-called Broad Street district, then reeking with filth and crowded to excess, with the Beacon Hill district; here the mortality rates were, in the first, six times the greater, and revealed the astonishing mortality of one death annually in every ten of its inhabitants. To show the ease with which those unfamiliar with statistics may be misled or mislead others, I would here refer to the closing argument by Mr. H. W. Muzzey, attorney for the defendant, before the Mayor and Board of Aldermen, which was printed and widely circulated, where by a single reference to the registration reports of Massachusetts for 1849 and 1852, he shows that the average *age at death* in the town of Brighton is 23 years and in Cambridge 21 years, and seeing no difference between the average age at death and of life, states the average of life to have been in Cambridge 21 years, and hence from my tables there has been a most marked increase in the longevity of life here during the last twenty years. *Reductio ad absurdum!* But this lesson of figures has a wider and practical bearing, and hence my reason for bringing it to your attention to-day.

It may be well said that the highest duty and most glorious privilege of the medical profession is to teach men to keep well, rather than to cure them when sick; and if it be true that whole communities separated only by arbitrary lines of division, by superior wisdom in selecting their surroundings and by personal care, may live one third longer than their neighbors (as is shown by the previous tables to be a fact in Cambridge), is it not a privilege and duty that we, as guardians of the public health, and to whom the people look for advice, should demand that even the poorest may be exempted from such suicidal fate?

I am aware that this is a question of no simple solution, and that while wealth too often brings with it, possibility of excess which leads to destruction, that poverty, even in our own land of plenty, often limits her subjects, and, hand in hand with intemperance, ignorance and crime, causes direct and large increase in the mortality rates.

I would advocate that our profession, not alone continue teaching sanitary science as applied at the bedside in their daily rounds of labor, but that, as Wendell Phillips would say, we become "*agitators*" upon this subject, until an educated public, alarmed for their own safety, demand that there shall be no embargo upon pure air, good water and healthy surroundings. Let our laws restrain the cupidity or ignorance of builders, and our tenement houses be constructed as safe from danger to life from a sanitary stand-point as from an architectural one. Obliterate the Miller-River nuisance, fill the low lands. Give us good and complete sewerage; good road beds for aid of careful drainage, clean streets, back yards and alleys. Remove every business deleterious to the public health, enforce an improvement or remodelling of the immense slaughtering, rendering, bone-boiling and soap-making establishments until these shall cease to be an injury to the public welfare; and give us, even here in Cambridge, a Board of Health with the knowledge and power to effect such a change.

Before closing, allow me to say we have reason for encouragement in the progress of the present. In New York, probably the dirtiest great city in the civilized world, the Metropolitan Board of Health has accomplished prodigies in cleaning this Augean stable.

Every physician must needs feel proud of the work so carefully and conscientiously done these last four years by our own State Board of Health. From the result of its labors already it is safe to say, the state financially never made a better investment, and, in its future results and indirect bearing upon the life and happiness of its every inhabitant, it is difficult to over-estimate its value.

The Board of Health recently appointed in Boston has inaugurated its work most grandly, by the active measures which so soon aided in subduing our late epidemic of smallpox, and there is room for it to be but the beginning of better things in its march through the lower quarters of the city at the north and west end.

Cambridge is now liberally filling in her worse than waste and desert places, and the lesson both in trouble and expense should prevent the opening of more streets, with a level below tide water, no drainage, every square foot reeking in moisture, and soon, if occupied, to be putrefying with animal and vegetable decomposition.

But, as has already been shown, our necessities for further improvement are pressing; and I appeal to you if it should remain a fact, that a city of less than 50,000 inhabitants, occupying so large a territory and situated so advantageously as Cambridge is, possessing very few paupers, eminently prosperous in business, representative largely in both wealth and culture, should compare unfavorably in her mortality rates with London, situated upon the Thames with her 3,000,000 inhabitants, a considerable percentage of whom are subject to the vital depression caused by a degree of want and misery unheard of in America.

Cambridgeport, April, 1873.

Progress in Medicine.

REPORT ON DERMATOLOGY.

By James C. White, M.D.

[Concluded from p. 576.]

Anatomy and Physiology.

Experiments upon covering Animals with Substances which prevent the escape of Perspiration.—Socoloff. *(Archiv für Derm. und Syph.—from Centralblatt—*Erstes Heft, 1873.*)* The results of his experiments in covering animals with varnishes were as follows:—1. Some hours before their death, clonic and tonic spasms in various groups of muscles were noticed, while the temperature in the rectum was considerably lowered. 2. Wrapping the animal in wadding did not succeed in raising the temperature *in recto* or in delaying the approach of death. 3. The inhalation of oxygen could not preserve the varnished animal from death. 4. In the stomach there were found ulcers, in consequence of deep extravasations. 5. Albumen was found in the urine very soon after the skin was varnished. 6. A diffused parenchymatous inflammation of the kidneys was constantly noticed, as well after the use of balsamic preparations (varnish, asphalt dissolved in turpentine), as of indifferent substances (glue, gum Arabic).

Transplantation of Skin. Menzel (*Wiener Med. Wochenschr.* in *Archiv für Derm. und Syph.*, Erstes Heft, 1873) reports upon the results of this operation in Billroth's clinic in Vienna. In large wounds more than twenty bits of skin were transplanted at once, and they were perfectly healed within two weeks. The grafts succeeded when taken from amputations which had lain for hours. The ordinary size of the fragment taken is one centimetre in length, one-third to one-half a centimetre in breadth, and as thin as possible. Grafts upon entirely fresh wounds have not yet adhered.

On the Structure of the Capillary Lymph-vessels of the Skin. Neumann. *(Archiv für Derm. und Syph.*, Erstes Heft, 1873.) 1. According to Neumann's investigations, the lymph-vessels of the skin form an enclosed tubular system, with independent walls, the inner surface of which is lined with flat epithelium. These walls are nowhere interrupted by stomata, so that there is no communication between them and the so-called juice canals or other interstices of the cutis. Neither can any gaps in the epithelium be discovered, even in diseased processes followed by enlargement of the vessels. 2. The relation of the capillaries of the blood to those of the lymph is only so far constant that the first always lie much nearer the surface than the latter. Deeper down, the branches, together with the respective mesh-work proceeding from each, cross each other in the most various directions. Nowhere was any second vessel within one of the lymph tubes to be seen, so that there can be no question about invagination. 3. The lymph-vessels form two distinct and thick networks in the cutis, the deeper of which is more ample than the superficial. Their walls are capable of great dilatation. The upper vessels are, in general, thinner; the deeper thicker, and, like the first, to all appearances without valves, which only become plainly visible in the subcutaneous vessels. The large lymphatics possess many branches of various width, which end blindly. They penetrate the papillæ of the skin, partly as simple tubes, partly as loops. 4. The hair-follicles and sweat-glands present about their periphery, but are not penetrated by, special lymph-capillaries. They surround the fat lobules in a similar way. In the subcutaneous fibrous tissue the vessels are largely developed. 5. The number of the lymph-vessels varies in different parts of the skin, the most occurring on the scrotum, the labia majora, the palms of the hands and soles of the feet. 6. In portions of the skin altered by disease, an enlargement of the vessels may be observed. 7. In ulcerative processes they are destroyed, but are capable of regeneration; and they occur, though sparsely, in scar-tissue. New growths from their walls he has never discovered. . . . . At the meeting of the Gesellschaft der Aerzte, where this communication was presented, Stricker expressed his doubts as to the existence of such a close system of lymphatics.

Iodide of Potassium eliminated through and decomposed in the Perspiration.—Dr. R. W. Taylor, of New York, in the April number of the *American Journal of Syphilography and Dermatology* (1873), reports the case under the title "an unusual feature of Tinea versicolor." The patient, when seen by him, on a hot day in August, had been taking large doses of iodide of potassium for a tubercular syphilide. When the man had taken off his shirt, he found that his back was covered with a dark, bluish-black eruption, and presented the appearance of a skin which had been daubed with ink made of iron and logwood. Other spots, not colored in this way, on the chest, presented the appearances of Pityriasis versicolor, and, on scraping off the scales, he found by the microscope the microsporon furfur in large quantities. It was found that the man was scrupulously clean, and that he had made no application to his back to discolor it. "It remained to be explained, therefore, why the eruption was darkened, and that occurring only on the back. Upon looking carefully at the man's shirt, I found that it was made of very thin, fine linen, which had been slightly starched, and I saw that it was a little stained on its back. This aroused my suspicions. It is unnecessary to add that the weather was terribly hot, and the patient seemed to perspire very freely. Upon inquiry, I learned that the man had been taking large doses of iodide of potassium, and that he had been lying on his back, sweating profusely; so this cleared up the doubt in my mind. Here, then, was a man with a copious eruption of Tinea versicolor, who was sweating profusely, and a portion of his skin was in close contact with a starched shirt. . . . . . The fact that the house physician had seen this eruption when red, shows that the staining went through the stages of red-mahogany color to black."

If the blackening in this case were due to the formation of the purple or bluish-black compound of starch and iodine, as Dr. Taylor believes, two conditions were necessary: first, the elimination of the iodide of potassium by the sweat-glands; and, second, the decomposition of the salt by the perspiration. The first of these, so far as we know, has not hitherto been observed; the second was, perhaps, not impossible through the agency of some of the products of the decomposition of the perspiration and sebum.

The Influence of the Nerves on Nutrition.—Dr. Power, in an article in the *Practitioner* (February, 1873) on this subject, gives, in relation to the changes which the skin undergoes under impaired nerve action as the result of injury, the observations of Schiefferdecken in six cases of this class. Amongst these were thickening of the skin, accompanied by strong pigmentation and desquamation. With one exception, the finger-nails exhibited a peculiar kind of hypertrophy, being strongly curved or claw-like, with transverse terraces or ridges. In two cases, where the nerves of particular nails appeared to be uninjured, the nails remained normal. The arms, also, exhibited increased hairiness; and, in three cases, there was increased secretion of sour-smelling sweat. In all cases, the temperature of the affected arm was lower than that of the uninjured one. The changes in the nails and the increased secretion of sweat appeared to be connected with certain nerve paths; and these, Schiefferdecken thinks, constitute or represent trophic nerves, whilst the other changes are due to the fact that the muscles being atrophied whilst the supply of blood remains unaltered, vicarious hypertrophy of the skin and epidermoid appendages results. Among other cutaneous affections which have been observed as results of nerve lesion, Dr. Power enumerates erythema, roseola, acne, herpes, urticaria, eczema, and pemphigus.

Untersuchungen aus dem pathologischen-anatomischen Institute in Krakau. Von Dr. Alfred Biesiadecki, Professor an der k. k. Universität in Krakau. Mit 11 Holzschnitten. Pp. 116. Wien. 1872.

This little volume contains the results of some of the most important investigations ever made in the pathological and normal histology of the skin. They first appeared, in part, in the Polish language, but as the author thinks they have not attracted due attention in their original form, he has republished them in German in the city where he formerly gave instruction in this department to so many of our students abroad. Among the seven papers the book contains, but three belong strictly to dermatology, as follows:—1. On the physiological and pathological anatomy of the lymph-vessels of the human skin; 2. On the anatomy of Lichen exudativus ruber; 3. On the formation of blisters and the regeneration of epithelium on the web membrane of the frog. The first of these was noticed in our last semi-annual report, the latter in another connection, so that we call attention to the book only that those interested in the subject may know where they may obtain the full text of these highly valuable contributions.

Special Diseases.

Periods of Infection in the Exanthemata.—Dr. Wm. Squire made a communication to the Epidémiological Society of London on this subject (*British Medical Journal*, April 26, 1873), in which he divides epidemic diseases into two classes, as their period of incubation is long or short, taking smallpox as the type of one and scarlet fever of the other. In smallpox it was not likely that, for the first week or ten days after exposure, a person had himself become infectious, but facts were adduced to show that infection was set up certainly two days before the eruption appeared. The eruption of smallpox appeared nearly a fortnight after infection, so that a person exposed to infection cannot be considered safe to those around him until after this interval has passed. In measles the same time must be allowed, although the eruption generally appears in less time, from ten to fourteen days. Many cases of measles show that it is in the catarrhal stage, the so-called sickening for measles, that the infection is spread, from two to three days before the appearance of the rash. On the outbreak of measles in a family, it is too late to expect to prevent its spread to others, if they have been with those sickening until the rash appeared. Though infection might begin in diseases of this class before the more prominent signs of the disease were declared, yet it did not persist so long as in some diseases of the other division. In scarlet fever, instances were given where infection was communicated by personal contact sixty-six and seventy days from the commencement of the complaint, or from six to seven weeks after the specific illness was over, while in measles it was generally sufficient to allow three weeks after it for infection to clear off.

Injection of Vaccine Lymph into the Subcutaneous Cellular Tissue.—In connection with the question of the possibility of vaccination through such attempted inoculations, lately discussed in this JOURNAL, the results of some experiments by Senfft, as communicated to the *Berlin. Klin. Wochenschrift (Archiv für Dermat. und Syph.*, Erstes Heft, 1873), are of interest. Injections of pure cow lymph, or of lymph one half diluted with distilled water, into the subcutaneous cellular tissue on the abdomen in calves, and one injection of human vaccine lymph, had a negative result. On the other hand, all seven animals were subsequently successfully vaccinated. Injections of animal lymph into the abdominal veins, or directly into the abdominal vessels, of calves, were wholly without result.

Smallpox in Berlin in 1871.—*(Archiv für Derm. und Syph.*, Erstes Heft, 1873, from *Vierteljahrschr. für ger. Med.)*—From Müller's report on this great epidemic, the following interesting facts are taken. In 1864, an epidemic occurred, destroying 620 persons, the largest number of deaths from the disease in any one year up to that time. In 1870, the deaths were 172 only, but in the frightful epidemic of the following year 3,552 persons died of smallpox in the city, and the number of cases of the disease was 17,074. The mortality, therefore, was 20·8 per cent. From the tables which accompany the report, it appears that the disposition to the disease is greater in the first year of life, and diminishes up to the fifteenth, from which period (owing to a loss of the protective power of vaccination) it again increases. The mortality is least between the tenth and twentieth years, and then again increases with the diminution of vaccine protection. Of those who had the disease, 2,731 had been vaccinated; of those who died, 1,133 had been vaccinated; so that the mortality among the vaccinated was 15·74 per cent., among the non-vaccinated 41·48 per cent.

On certain Affections of the Skin occurring in Pregnancy, Childbed, and in connection with Uterine Diseases.—Prof. HEBRA in the *Wiener Med. Wochenschr. (Archiv für Derm. und Syph.*, Erstes Heft, 1873*)*, after mentioning chloasma, acne, eczema, pruritus, erythema, urticaria, and pemphigus as the affections most common to these conditions, describes an eruption which he has had opportunity to observe in five cases during pregnancy and childbed. It consists of pustules characterized by the early purulent nature of their contents, their arrangement and peripheral extension. In nearly every case, the first efflorescences showed themselves upon the inner surface of the thigh in the form of pustules of the size of a pin's head, arranged partly in groups as large as a two-cent piece, partly isolated, which soon, by fresh outbreaks at the periphery, formed circles or concentric rings. Within a few days the number of groups increased, the circles enlarged, and fresh isolated pustules constantly appeared, so that gradually the legs, abdomen, chest, arms, hands, feet, and finally the back, neck, face and scalp appeared covered with such groups. While the pustules in the centres of these groups were drying up into flat and dark-brown crusts, new efflorescences, filled with yellow purulent fluid, were constantly developing around their borders, thus imitating the appearance of a herpes iris or circinatus. Inasmuch, however, as it is not groups of vesicles, but of pustules, which characterize the beginning of the disease, while its course is not acute, but marked by constant fresh outbreaks, we are not able to arrange it under the genus Herpes in spite of its striking resemblance, but are obliged to give it a name suitable to a pustular eruption, and to recognize it in accordance with the custom of nomenclature as a sort of Impetigo. Inasmuch, too, as the pustules group themselves in circular form, as in herpes circinatus, we must select for its title Impetigo herpetiformis. The eruption was accompanied throughout its whole course by intense fever and great prostration. In three of the cases observed, successive outbreaks showed themselves with greater or less rapidity to the end of life, while in the other two cases, after the groups and circles of pustules had existed for several weeks, all the efflorescences dried up, and the thick crusts, when they finally fell off, left behind them healthy but strongly pigmented skin. In some cases, on the contrary, the pustules did not dry up on all parts of the skin, but their epidermal coverings softened into a gray, stinking pap, which rested upon a red and moist base, especially about the flexures of the joints, and gave the disease an eczematous appearance. Ulceration never occurred, however, but the patches either remained in this eczema-like condition, or the secretion, consisting of epidermis, blood and purulent elements, with abundant fat, dried in the form of crusts of various colors, beneath which the normal epidermis was restored. Only in one case, and after repeated relapses, did recovery occur; the other four cases proved fatal. The general symptoms were, chills before each successive outbreak of the efflorescence, which ended in a considerable degree of fever of several days' duration. The urine was always acid, particularly dark in color, and contained a few pus corpuscles, much urea, but no albumen. Three of the patients had been delivered from two to five weeks before their entrance into the hospital, while the other two came for treatment in the last month of their pregnancy. The appearances upon the skin were the same both before and after delivery. A *post-mortem* examination was made in the four fatal cases, but no positive cause of death and no puerperal process was discovered, neither was there was anything in the constitution, circumstances, or previous health record of the patients to account for the disease. Syphilis could be positively excluded from every case. For want of other ætiological grounds, and in consideration of the fact that all the cases occurred in the pregnant and puerperal state, Prof. Hebra is inclined to the opinion that Impetigo herpetiformis is caused by some morbid change in the genital apparatus.

In commenting upon this disease, Auspitz calls attention to two cases described by him in the first volume of his *Archiv*, under the title Herpes vegetans, which he considers identical with those of Prof. Hebra.

One of the cases occurred in private practice and also proved fatal; the other was probably one of those above described, so that of six cases five died.

Lichen hypertrophique of Hardy.—CHARPY (*Annales de Dermat. et de Syph.*, tome quatrième, No. 1) gives the results of his microscopic examination of two cases, one of them ulcerated, of the affection thus named by Hardy, from which he draws the conclusion that the process is not an inflammation, but a tumor. This is shown, he thinks, by its clinical history on one side, its development by friction or spontaneously, its limitation, its slow course, its resistance to all treatment, except its destruction by caustic or excision; on the other side by its anatomy, the elevation which its hypertrophied tissues attain, the development of the horny layers, the verrucose complications, and the destruction of the glands. This tumor being constituted by an increase of all the layers of the skin, he regards Lichen hypertrophique as a papilloma.

The Relations between Lupus, Scrophulosis and Tuberculosis.—(*Archiv für Dermat. und Syph.*, Erstes Heft, 1873, from *Centralblatt.*)—From examinations of extirpated portions of the exfoliating and hypertrophied forms of lupus, Friedländer finds that lupus tissue belongs, in general, to the class of fibrous structures, consisting, that is, of cells in an intercellular substance. Of the cellular elements he recognizes three forms:—

(a.) Small, round cells, with little protoplasm around the relatively large nucleus (common granulation cells);

(b.) Cells four times as large, with a relatively small nucleus and transparent protoplasm, but slightly tinged by carmine;

(c.) Typical giant cells (Riesenzellen) with very numerous nuclei, mostly situated about the periphery.

Morphologically considered, intermediate forms between a and b, as well as between b and c, are found. The arrangement of the cells is not wholly regular, although, in general, the granulation cells occur more often at the periphery, the giant cells in the centre of the lupus tubercles.

This result suggests very closely the structure of the smallest tubercle nodules, as described by Schueppel, from scrofulous lymph glands, as well as of the miliary tubercles of various organs, and other scrofulous processes. Friedländer concludes that a much more intimate connection between scrophulosis and tuberculosis exists than has hitherto been admitted; and, also, that lupus stands in a very close relation to these affections histologically and clinically. The histological identity of lupus and scrophulosis was shown by Auspitz in 1864.

The Pathology of Leprosy.—At a recent meeting of the London Royal Medical and Chirurgical Society (*British Medical Journal*, April 26, 1873) a communication from Dr. H. V. Carter, of the Bombay Army, on leprosy in India, was presented. He believed that neither climate nor endemic influences had been shown to favor or check the prevalence of the disease; faults of diet, hygiene or habit equally failed to account for its varied distribution. The population generally was affected to the extent of one in about 1000 inhabitants, but the proportion differed in the several races, and hence in localities occupied by those races more predisposed than others. The seat, nature, and causes of the leprous disease were then inquired into. It was affirmed that, so far as manifested, its seat was the cutaneous system, evidence to that effect being negative and positive. The latter included certain interesting features revealed on dissection; thus, the cutaneous nerves were affected only, or chiefly and primarily, in that part of their course between the skin and the deep fascia of the limbs or trunk; and when the deeper-seated nerve-trunks of compound function were diseased, it was only their sensory elements which appeared to be affected, and often those in continuity with skin-nerves. Motor paralysis was seldom marked in lepers who could crawl on, or bend, the stumps, which were sometimes all that remained of hands and feet. He considered that there were trophic nerves in connection with those termed sensory; and that nutrition, as a process, might be directly influenced by the nervous system. It was submitted that all the essential phenomena of the leprous disease might be traced directly or remotely to the characteristic nerve lesion. As to the nature of leprosy, the existence of a dyscrasia or primary blood-change seemed hypothetical and even needless; the proximate cause, it might be said, resided in a faulty condition of certain tissues of the integument. Respecting contagion, or inoculation, as causative influences, the absence of crucial facts was remarked on. Europeans living long in India were virtually never affected with the disease.

Rhinoscleroma.—GEBER. (*Archiv für Dermat. und Syph.*, Viertes Heft, 1872.)—This affection, a new formation on the nose, was described and named by Hebra in 1870, and a full account and picture of the same may be found in the last Lieferung of Virchow's Handbuch, Hautkrankheiten, by Kaposi. After a thorough observation of three cases, Dr. Geber, assistant in the skin clinic at Vienna, contributes a clinical-histological study with regard to its nature. As the result of his microscopic examinations, he concludes that the changes in the affected tissues consist in a diffuse new growth of fibrous tissue abundantly infiltrated with cells, and gives two illustrations of the anatomical appearances by Heitzmann. From carcinoma, it differs both clinically and histologically. Occurring always at middle age, it often dates back to the period of puberty, and, after a growth of many years even, produces no ill effect upon the system at large, nor are the nearest glands secondarily affected. Ulceration never occurs after cauterization or cutting, but the tissues heal as readily as those of the healthy parts. Consisting, in the main, of granulation cells and an abundant growth of fibrous intercellular substance, its anatomical elements, also, are not those of carcinoma, but of a chronic inflammatory process simply. Just as eczema, for example, is capable, after long duration, of producing an elephantine enlargement of the skin, so this affection Dr. Geber is led to regard as an infiltration and proliferation of the mucous or submucous tissues in consequence of some chronic irritation of an inflammatory character. He considers the affection described by Weber in his treatise on the diseases of the nasal cavity as Perisarcoma to be the same.

Prognosis of Warts.—Mr. HULKE (*Medical Times and Gazette*, Jan. 11, 1873), in a clinical lecture on rodent cancer, draws the following conclusions:—1. Not to think lightly of small, hard pimples and warts on the face of persons advanced in life, but promptly and thoroughly to excise them, especially if they show a tendency to grow, ooze and scab. Their complete excision, together with a broad fringe of sound tissue, will probably secure a future immunity. It is advantageous to close the fresh wound, when large, with a flap of sound skin from an adjoining part. 2. Never try to destroy them with nitrate of silver, as is too often done, because its action is too superficial, and its use seems often to hasten their progress. 3. When the surface of the ulcer is so irregular that complete excision is impracticable, it should be supplemented by burning freely with a hot iron those parts which could not be reached with the knife, and by the free application to them of the chloride of zinc paste. 4. Some apparently desperate cases, at an advanced stage, may thus be treated very successfully, if the patients possess confidence and docility. 5. Such composite operations are well borne by persons in advanced years, if care be taken to avoid much bleeding.

(Care should be taken not to confound with the above growths simple sebaceous warts, which, although often crusted and suspicious looking in old persons, are generally easily removed or kept under by the frequent use of sweet oil and soap alone.—J. C. W.)

Epithelial Cancer of the Skin.—(Archiv für Dermat. und Syph.) Bergmann publishes, in the *Dorpat. Med. Zeitschrift*, an analysis of 261 cases of this affection observed in the local clinic. Of these, 143 were upon the under lip. Comparing his cases with those of Thiersch, Billroth and others, he finds that 81·57 per cent. were males, and 18·43 per cent. females. The greatest number of cases occurred between the 50th and 60th years of life. As to the results of treatment, 117 of the cases only were kept under observation long enough to warrant any conclusion in this respect. Of this number, 57 exhibited a return of the affection after operation. Those who lived more than three years after extirpation, without a relapse, were considered cured. The number of these was 20, while 13 others lived more than three years, and died of other causes. Number of deaths after operation, 19. The percentage of cures was 28·20, and of relapses 57,25, which he regards as unusually favorable.

On the origin of Cancer.—Dr. Ogston, of Aberdeen, in the April number of the *Edinburgh Medical Journal*, publishes a paper on this subject, in which he is inclined to the opinion of Billroth and Waldeyer, that cancer always has its origin in epithelium. In addition to, and in support of, their arguments, he has noticed that epithelium, even though not actually cancerous, is in an abnormal state of hyperplasia, and seems ready itself, by a slight increase of activity, to reproduce the disease when the chief forces have been removed, or to participate in its extension when allowed to remain. In cutaneous cancer, he finds the Malpighian layer is mainly affected in the epithelial hyperplasia; without multiplication of the nuclei of its cells, it is thickened and more succulent; it supports the likewise thickened layer superficial to it, and is accompanied by increased proliferation in the epithelial appendages of the skin. The sweat ducts are in a state of enlargement, plainly due to the hyperplasia of their epithelial linings, and the hair follicles, from a similar cause, are large and longer than usual, extending into the skin and subcutaneous tissue to an unwonted depth. The hairs are more brittle than normal. The papillæ of the skin are not hypertrophied nor separated by hypertrophied epithelium to the extent seen in epithelial cancer proper, a marked distinction between the latter and other forms.

Porrigo decalvans.—Dr. Dyce Duckworth, of Edinburgh, contributes to the eighth volume of *St. Bartholomew's Hospital Reports* (1872) a very valuable paper on the nature and treatment of this affection. Dr. Duckworth is not a believer in the parasitic nature of the disease, and his article is written mainly in support of his opinion upon this point; but, instead of attempting to persuade his readers that there are no grounds for the opposite belief, and that there is nothing to be seen in or about the hairs resembling parasitic elements excepting sebaceous matter, he does describe appearances which closely resemble the spores of a fungus, and not only describes but figures, in several admirable plates, appearances which, we doubt not, if shown to a non-believer, ignorant of what they are intended to illustrate, would at once be pronounced excellent representations of fungus growth in hair. The appearances he describes as innumerable, bright, refracting granules, varying somewhat in size, but mostly round or oval, which closely invest the hair, and are especially noticeable where the hair is broken off, and in the stumps which are to be seen near the edges of the bald areas. Later, he says, the shaft appears as if overgrown with these granules, presenting the aspect of an old tree invested with moss and lichens. These appearances he has never failed to find, he states, in any case of porrigo decalvans, and calls them oleo-granular matter, likening them to the natural pigmentary matter found in normal hair cells. These granules he has failed to make grow in glycerin or on strips of apple, and he finds that they are soluble in ether. He has never found a single element in any instance which he thinks could be rightly termed fungous or parasitic; and as he does find these, and easily, in favus and tinea tonsurans, he refuses to believe that he could miss them in cases of so-called tinea decalvans. The belief, entertained by others, that these bright, refracting granules are vegetable, he accounts for by the fact that they are not easily dissolved by ether, maceration for several days in pure ether failing, according to his statement, to remove them from the root-sheath. The cases of the affection which have seemingly been proved to be contagious, he thinks may be explained by the simultaneous occurrence of tinea tonsurans. He has never seen any of the redness of the scalp at the affected parts which has been described by others as an occasional appearance.

He is disposed to regard the disease as a "nutritional perversion," and thinks the neurotic forms of alopecia are different from true porrigo decalvans. He recognizes two varieties: the first occurs chiefly under puberty in the form of scattered bald spots, which seldom last longer than a year, and in which the prognosis is good. The second rises in the scalp, and may spread indiscriminately. The prognosis is more grave.

Treatment. He does not believe in the efficiency of arsenic in the disease, but is inclined to give the preference, among external remedies, to the application of oil of turpentine, as recommended by Erlach, of Bern, on account of its parasiticidal qualities.

(This, of course, is but a report of Dr. Duckworth's views, and upon one side of the question. They are of real value. Many of his opinions and observations, however, are at variance with those of equally good observers, and are capable, we believe, of refutation or explanation in support of the existence of a parasitic form of the disease also.)

General Therapeutics.

Carbolic Acid, its Internal Use in some forms of Skin Diseases.—Dr. Guntz, of Dresden *(Archiv für Dermat. und Syph.)*, gives us the results of his use of this drug in 150 patients of all ages. Its action in itching of the skin, independent of any perceptible change in its tissues, he praises highly; the trouble sometimes disappearing after a few days even, and in some patients not returning at the end of a year. In many cases, the improvement was only temporary; in others, there was none. In prurigo, a much longer use of the acid was necessary before the pruritus yielded and a favorable change in the skin took place. This improvement first showed itself by the diffused redness circumscribing itself, and being more sharply defined against the paler skin, so that the patient thinks, in the beginning, that the disease is worse. Subsequently the patches, with the diminution of the itching, become paler, the infiltration disappears, and gradually, in the most favorable cases, the skin returns to a healthy state for the greater part. Occasionally, an abundant formation of pustules is observed upon the joints of the arms and upon the backs and palms of the hands before the thickening disappears, which are caused directly by the acid. They must be opened, after which they rapidly heal. Some of the cases of prurigo remained, for months after the treatment, apparently cured; others improved only as long as the medicine was used, the disease increasing as soon as it was omitted. In about half the cases scarcely any, or only the slightest, diminution of the itching and inconsiderable change in the skin followed.

In eczema, improvement was only exceptionally noticed from its use; and, in these cases, arsenic seemed for a time to be more effective than usual, when given subsequently to the carbolic acid. Its beneficial action ceased, however, before the point of recovery. In psoriasis, lupus and syphilis the remedy was powerless.

Treatment of Burns.—Dr. Bruyne, in the *Gior. ital. delle malatt. vener. e della pelle (Archiv für Derm. und Syph.*, Erstes Heft, 1873), gives the preference to the linim. calcis over all other remedies used in burns, attributing to the lime water all the antiphlogistic and antiseptic action it possesses. The addition of the almond oil, which soon becomes rancid upon the wound, he considers entirely useless. The lime water alone, however, has no anæsthetic effect, and requires to be constantly renewed. Both of these objections he overcomes by adding to the lime glycerin and æthyl chloride after the following formula:—Freshly precipitated hydrate of lime, 3 gm. $(\mathrm{CaCl} + 3\mathrm{KO}, \mathrm{HO} = \mathrm{KCl} + \mathrm{CaO}, \mathrm{HO})$; glycerin, 150 gm. To this, after gently warming, chlorinated æthyl chloride, 3 gm., is added. For the latter, can be substituted laudanum or any other stupefacient, but he prefers the æther anæstheticus, as it is scarcely volatile, not irritating, and is rapid in its action. In this a substance is obtained of the consistence of syrup, of pleasant odor and alkaline reaction, with which a fine linen compress is to be thoroughly saturated and then laid upon the wounded surface. Over this, a piece of oiled silk or flannel cloth is to be laid to prevent evaporation.

Treatment of Scabies in Children.—Dr. Monti *(Jahrb. f. Kinderk.* in *Edinb. Med. Jour.*, Feb., 1873), knowing by experiment that copaiva balsam kills the itch insect, tried it in cases in children. After previous washing, it is rubbed in two or three times a day, producing severe redness, which passed off in half an hour. The itching usually ceased after the first inunction, the irritation of the skin diminished, and disappeared entirely after three or four inunctions. The cure was in every case complete. The duration of the treatment varied from two to twelve days. It is cheaper than Peruvian balsam, has a pleasant smell, and does not soil the linen; and is, especially for infants, preferable to sulphur. Carbolic acid, in solution, fifty-six grains to the pound of water; or, as ointment, fifty-six grains to four ounces of simple ointment. After first cleansing the skin, use it as a wash, or inunction. It produces slight burning and redness, which soon disappear. In all the cases so treated, complete cure was affected, generally after six to nine inunctions, within two to four days; if eczema exist with it, it is generally longer, about twelve days. The author never observed poisoning; it produces no eczema, is very convenient, and less costly than copaiba or Peruvian balsam, and has the advantage over styrax that the linen is cleansed and purified.

Reports of Medical Societies.

MASSACHUSETTS MEDICAL SOCIETY.

First Day's Proceedings.

The anniversary meeting of the Society began on Tuesday, June 3d, in this city.

The morning hours of that day were occupied by visits to the wards and operating-rooms of the Massachusetts General Hospital and of the City Hospital.

At noon, the Fellows assembled in the hall of the Lowell Institute. Dr. B. E. Cotting, the Vice President, occupied the chair. Papers on medical and scientific subjects were read as follows:—

1. Lewis S. Dixon, M.D., Worcester, *Improvement in the Treatment of our Ophthalmic Cases.*
2. Nathan Allen, M.D., Lowell, *Hereditary Disease.*
3. John O. Webster, M.D., Lynn, *Children's Diseases in Massachusetts.*

At a quarter past one, P.M., the Society took a recess of two hours, after which it listened to the following:—

4. Frederic I. Knight, M.D., Boston, *The Treatment of Growths in the Larynx with the Aid of the Laryngoscope.*
5. Frederic Winsor, M.D., Winchester, *The Duties of Physicians to Nurses.*
6. Alfred Hosmer, M.D., Watertown, *Life and Disease.*
7. J. F. Alleyne Adams, M.D., Pittsfield, *Notes on the Pneumogastric.*
8. Melville E. Webb, M.D., Boston, *Report on the late Epidemic of Smallpox in Boston.*

At the conclusion of Dr. Winsor's paper, Dr. H. I. Bowditch, of Boston, offered the following resolution, which was adopted:—

Resolved, That a committee of nine be appointed to urge on the great hospitals of Massachusetts the importance of establishing in connection with these institutions schools for nurses, similar to that in St. George's Hospital, London, and more recently in similar institutions in New York.

The committee was appointed by the chair, and consisted of Drs. Winsor of Winchester, Bowditch of Boston, Wheeler of Chelsea, Peirson of Salem, Fiske of Northampton, Gage of Worcester, Holmes of Milton, Nickerson of Lowell, Stone of Wellfleet.

Dr. Gurdon Buck, of New York, who has devoted special study to the subject of reparative surgery, was introduced to the Society, and gave an interesting description of his method of treatment, illustrated by specimens. A vote of thanks was presented to Dr. Buck for his instructive remarks.

At 6, P.M., the Society adjourned.

COUNCILLORS' MEETING.

At half past seven in the evening, the Councillors of the Society, to the number of eighty-nine, assembled at the rooms, No. 36 Temple Place. The President, Dr. George C. Shattuck, occupied the chair.

The record of the last meeting was read and accepted.

Various committee reports were presented and accepted.

The following standing committees were appointed by the President:—

On Publications.—G. C. Shattuck, B. E. Cotting, C. Ellis.

On Resignations.—J. Ayer, F. Minot, J. C. White.

On Finances.—G. H. Lyman, C. D. Homans, W. W. Wellington.

On procuring Scientific Papers.—H. W. Williams, C. E. Buckingham, G. H. Lyman, C. D. Homans, E. J. Forster.

The following officers were elected by ballot:—

President, Dr. G. C. Shattuck.

Vice President, Dr. B. E. Cotting.

Corresponding Secretary, Dr. C. W. Swan.

Recording Secretary, Dr. F. W. Draper.

Librarian, Dr. D. H. Hayden.

Treasurer, Dr. F. Minot.

Orator, Dr. Nathan Allen.

Anniversary Chairman, Dr. R. L. Hodgdon.

Committee of Arrangements, Drs. R. Amory, A. H. Nichols, C. J. Blake, T. Dwight, Jr., J. C. Warren.

A committee to whom, at the last meeting, was referred the matter of procuring a legal opinion concerning the right of the Society to admit females to its membership, reported an opinion of legal counsel that there was no obstacle in law to such membership. After considerable discussion, it was voted that the Censors of the Society be instructed not to admit females to examination as candidates for admission to fellowship.

After the close of the meeting, the Councillors proceeded, by invitation, to the house of Dr. G. H. Lyman, where, with several other medical gentleman, they were very handsomely entertained.

SECOND DAY'S PROCEEDINGS.

The Society assembled at 10 o'clock, A.M., in the hall of the Lowell Institute, on Wednesday, June 4th, for the exercises of the annual meeting. The President, Dr. George C. Shattuck, occupied the chair.

The Secretary's record of the last annual meeting was read and accepted.

The Secretary, Dr. Swan, then read the records of the Board of Trial in the case of Dr. James Howarth, of Andover, and of Drs. Bushnell, Fuller, Hoffendahl, Russell, Talbot, Thayer and West; the judgment in the case of Dr. Howarth was for acquittal, that in the cases of the other named Fellows was for expulsion.

The Secretary moved the acceptance of the records and report of the Board of Trial, and that the following vote be passed:—

Voted, Upon the report of the Board of Trial for the trial of the charges against William Bushnell, Milton Fuller, Herman L. H. Hoffendahl, George Russell, Israel T. Talbot, David Thayer and Benjamin H. West—that the said William Bushnell, Milton Fuller, Herman L. H. Hoffendahl, George Russell, Israel T. Talbot, David Thayer and Benjamin H. West *be and are* expelled from the Massachusetts Medical Society.

The President explained that the motion was presented in order that any legal objections or technical obstacles might be removed, in view of the possibility that the case might be again brought before the courts.

He further stated, in answer to questions, that the sentence of expulsion passed by the Board of Trial was not signed by all the Board because the fifth member was detained by the imperative exigencies of a patient; and that the persons designated in the vote had not been originally received as members of the Society with the knowledge that they were homœopaths.

Without further discussion, the question, being called for, was carried with but one dissenting vote.

On motion of Dr. B. E. Cotting, it was voted that when the meeting adjourned it be until the first Wednesday of October next, at 3, P.M., at such place as the Councillors' meeting on that day may be held.

The report of the Treasurer, Dr. Francis Minot, showed the receipts of the year to have been $9,683.38; expenditures, $9,400.74—leaving a balance of $282.64 on hand.

Dr. B. Joy Jeffries made a personal explanation, denying the authorship of an article in relation to ether, published in the last number of *Braithwaite's Retrospect* and attributed to him.

The reading of scientific papers being resumed, Charles L. Pierce, M.D., of Natick, read a paper entitled "How shall we warm our houses?"

Dr. Henry W. Williams, of Boston, after sketching briefly the various operations for cataract which have been practised, described and demonstrated the new operation known as Liebreich's.

Mr. A. Graham Bell, of Boston, late of Edinburgh, read a paper on the physiological aspects of the system of visible speech, invented by his father and applied in teaching deaf mutes to speak. He illustrated the system by the aid of several of his pupils, who had been in training for a longer and shorter time. The exercise was of uninterrupted interest.

At one o'clock, Charles E. Buckingham, M.D., of Boston, delivered the annual discourse. At the beginning, he briefly reviewed the history and objects of the Society. It existed by an act of the Commonwealth, not for money-making, but for the advancement of medical science, the health and good of the public, and its protection from quacks and tricksters. Its members were not bound down to any specific cure or mode of practice. They should receive instruction from any one whose opinions were entitled to respect. Discussion and research were duties which they ought to perform. They agreed in ignoring theories unsupported by facts, and were willing to listen to any one of experience whether they agreed with him or not. Medicine, he continued, was not the only curative power, and were it to-day proved useless the physicians would still have enough to do; and, after stopping to class all those who pretended to cure by any one method, by spiritualism, homœopathy, allopathy, or any other dogma, as mere quacks, he mentioned as one of the many things to which the physician could turn his attention, the subject of mortality among infants. A consideration of this occupied the remainder of his discourse. He thought half the deaths of infants were occasioned by disease of the digestive organs, caused by the substitution of artificial for natural nutriment. The carelessness of mothers in the dress of their children was also severely commented upon. The address occupied an hour.

The thanks of the Society were tendered to Dr. Buckingham, for his exceedingly original, learned and common sense address.

At 2 o'clock, the society adjourned, to partake of the annual dinner in Music Hall, the Fellows, to the number of about six hundred, passing into the hall according to seniority. Music was furnished by the Germania Band.

After grace was said by the Rev. Dr. Todd, of Pittsfield, the company spent an hour at the repast.

The anniversary chairman, Dr. Oscar C. DeWolf, of Northampton, made an introductory address of welcome, and congratulated the Society on the fact that it had won the respect of the profession throughout the world, by its successful endeavor to maintain its traditional dignity and integrity.

He announced as the first toast: "The Massachusetts Medical Society; established a century ago, for the development and maintenance of medical science; composed of practitioners of medicine to whose talent, charity and fidelity every hospital and by-way, and the poor on the hillsides and in the valleys of the Commonwealth bear daily testimony; is fitly represented by a gentleman whose philanthropy, benevolence and social virtues are recognized by all, and who is regarded by all as a worthy successor of the many illustrious men who have preceded him in the chair he occupies."

Dr. George C. Shattuck responded with an allusion to the excellent organization of the Society. They had been called upon to perform a painful duty in the enforcement of discipline for the honor and benefit of the Society. He bore witness to the great patience, charity, ability and zeal with which the Board of Trial had performed their difficult duty.

The next sentiment, to the "Commonwealth of Massachusetts," was responded to by His Excellency Gov. Washburn, who said he was present to testify his interest in the Society, which embraced the best members of the profession in the Commonwealth. He spoke at length upon the progressive education of the present age in all the professions, and the growing necessity for special preparation for each of the professions. The coming test of men would be, not what they profess they can do, but what they are doing to make the community in which they live better.

The next toast was:—

"The health of Dr. Jacob Bigelow—A veteran in the medical profession. May his years be long, and his life, in the future as in the past, be prosperous." In response, the band played "Auld Lang Syne."

"Harvard University, first and foremost of the seats of learning in this country—It has won the gratitude of the medical profession for the new and more systematic method of medical instruction under its present administration," found a response from President Eliot, who thanked the Association for their support, and said that the new plan had worked to the entire satisfaction of all. He complimented the profession upon their thorough scholarship and the fact that they were the daily scientific instructors of the household and its defenders against superstition. Superstition, ignorance and idolatry were all around us, and jostled science in modern society in the idolatrous faith in a universal specific.

The sentiment to the "clergy" was given, and the chairman called up the Rev. John Todd, of Pittsfield, as a "gentleman who had always been the friend, patron and defender of legitimate, rational and scientific medicine." He was welcomed with a warm round of applause, and said the Society had gone down deep in the hearts of a great people. It took more to make a lawyer or doctor now than it had in any previous generation, and they could have no higher ambition than to hold up the flag of the fathers, which had health within its folds.

Dr. Charles E. Buckingham, the Orator of the day, was called out, and made a pleasant speech.

Ex-Mayor Shurtleff responded for the "City of Boston," and spoke of the Board of Health, which had done its duty so manfully and fearlessly; he paid a high compliment to the energy and efficiency of Mayor Pierce.

"The physician a hero, when in his official capacity and from a high sense of professional duty he boldly confronts the 'pestilence that walketh in darkness and the sickness that destroyeth in the noonday.'" The chairman announced as the respondent, Dr. Samuel A. Green, Boston's City Physician, who had during the past winter distinguished himself and honored the profession for the ability with which he treated the hideous epidemic which prevailed in this community.

In response, Dr. Green spoke of the peculiar and unfortunate sanitary situation of Boston during the past year, an outline of which he gave, and said the whole truth had never yet been told. The city looked to the new Board of Health with strong hope that there should be no renewal of the epidemic.

"The Country Doctor" met with an eloquent response from Dr. S. K. DeWolf, of Chester.

Dr. Henry W. Williams was introduced as one "whose facile hand had given sight to the blind and whose labors had brought honor to the Society in Europe and America," and made a speech in which he urged the importance of individual investigation upon the members of the Society. He said the Society was never so strong as at present, vigilant as it was in the public welfare, which found its reward in the public confidence.

Mr. A. Graham Bell responded pleasantly to a complimentary call from the chair.

Dr. Thomas N. Stone, of Wellfleet, was introduced as "the recent explorer in Utopia," and received a warm welcome. He spoke of the condition of the physicians in Utopia, where there were no medical martyrs, and where, when a physician in a Society differed from his fellows, he just quietly withdrew. In conclusion, he read a poem, which was received with manifestations of pleasure by the auditors and from which we take the following stanzas.

THE TROUBLES OF COPARTNERSHIP PRACTICE.

A DREAM OF RIP VAN WINKLE, JR.

Last night I had a queer, queer dream:
I dreamed the fight was o'er;
The suffrage bill had passed the house;
Woman was slave no more.

My loving spouse was Doctor dubbed,
And a diploma sported;
And like M.D.'s, with shingle new,
All patronage she courted.

The caudle o'er, the good-night said,
The day's toil brought me sleeping;
Gently toward the midnight hour,
Light-footed Time was creeping.

And Mrs. Winkle by my side—
Now taller by a span—
Beneath the weight of honor new,
Was snoring like a man.

I heard a tinkle, loud and shrill,
Ring through our outer hall;
That signal that humanity
Is getting up a squall.

"Wake, Mrs. Winkle," sharp I cried,
"My M.D. Winkle, dear,
The storm roars loud—but louder yet,
That cursed bell I hear."

"Why don't you answer it?" she said,
Shivering 'neath blankets warm,
As louder round our little cot
Howled fierce the wintry storm.

"Not I, my dear; 'tis now your turn,
For I was out last night;
The bill has passed—to midnight nap,
Man now has equal right."

"But then the babe?" "O! Nurse it well,
And leave nurse-bottle here;
I'll snuggle it while you are gone
Upon your visit, dear.

Good night, my dear! My blessing take.
The darling warm I'll keep;
And, 'neath this law of equal rights,
While you must wake, I'll sleep.

But when she's drained the pearly founts
Nature designed for her,
Please put upon her, ere you go,
A change of diaper."

"Not I," she said, "that's now your task,
For that's your equal right;
And you may find, my husband dear,
That two will watch to-night!"

She shut the door, and out she went
Into the night and storm.
I cuddled up our darling babe
To keep her sleeping warm.

But soon the babe began to search
For founts that were not there;
And kicked and squalled in wicked style,
Despite my soothing care.

"Hush-a-by baby," soft I sang,
Sang in my gentlest tone;
But 'bove my bass her treble shrill
Rang out as if alone.

On pillow soft as Queen Mab's throne
The squalling child I set;
I held her on my aching hands
Till both my hands were wet.

I pressed her to my bony breast,
She only squalled the louder;
In vain I gave her pulsatill,
And then a Dover's powder.

Like vestal nun, in robes of white,
I paced that chamber floor;
Sterne's angel dropped a tear upon
The oaths that night I swore.

"Confound the child!" at last I cried;
"Confound these Daniels all,
I'll move amendment to that bill,
No babe at night shall squall.

When next these grannies wise essay
To dub my wife M.D.,
I'll pray Dame Nature that she make
A wet nurse out of me."

Slow came the morn, slower my spouse;
The morning meal was poor;
The babe squalled on, and glad I saw
My dear wife ope the door.

A roguish look was in her eye,
As she smiled on babe and me;
And when she hoped I well had slept,
It looked like irony.

Tinkle, tinkle went the bell,
Breaking this night-mare theme;
I woke, and gladly faced the storm,
Thankful 'twas but a dream.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, JUNE 12, 1873.

THE INTRODUCTION OF ANÆSTHESIA.

WE publish, under the head of correspondence, a letter from Dr. William J. Morton, calling our attention to the late attempt in New York, to give the credit of the discovery of anæsthesia to Dr. Wells, of Hartford. The whole affair is rather curious, but of so little weight and so harmless, except to those concerned in it, that we might pass it by without notice, were it not that as it was in Boston that anæsthesia first became a reality, we feel that we are in some degree responsible for the preservation of the truth concerning it.

On May 21st, ult., Dr. Sims, Prof. Doremus (both former supporters of Morton's claims), and Prof. Hamilton lectured on the subject, giving all the credit to Dr. Wells. None of their arguments are worth quoting; indeed they do not deny that if, after his failure in Boston, nothing had been done by others, the world would have been no better off than if Dr. Wells never had lived. The most astonishing statement made at the meeting is that of Prof. Hamilton, who said he believed that perhaps fifteen per cent. of the deaths from anæsthesia were due to ether.

In 1844, Dr. Wells made a brilliant attempt and failed. In 1845, nothing new was made public. In 1846, Dr. Morton proved that anæsthesia could be induced with certainty and safety for an indefinite time. The New-York *Evening Post* states some points so clearly and correctly, that we cannot do better than quote from it. Concerning the introduction of ether it says:—

> "But it was Morton who had the confidence—whether from rashness or knowledge does not matter—in its safety, and the energy and perseverance to insist upon trial after trial till the virtue of the remedy was established to the satisfaction of the medical world and world at large.
>
> "It is the first step that costs and counts, and that step was Morton's. With anæsthesia established as a practical fact, it was easy enough for others to follow with other agents, as Sir James Y. Simpson with chloroform. . . . . Jackson knew, and Wells knew, as many had known before them for twenty centuries, that there was such a thing as anæsthesia, and that it would be a blessed thing for their fellow-creatures to make a practical application of it. Many of them tried to make that application, and establish the fact as a recognised and indisputable addition to human knowledge and universal practice, but failed. The man who did not fail, who not only tried but succeeded, was, if human testimony is to be relied upon, Morton."

The following letter addressed to Mrs. Morton from a surgeon, than whom no one living is more familiar with the history of anæsthesia, contains all that need be said on the subject. It appeared in the New-York *Times* of May 28th:—

BOSTON, May 19, 1873.

MY DEAR MADAM: I received to-day your note of the 16th inst., announcing an effort in New-York to show that Dr. Wells was the discoverer of anæsthesia. If this is the real object, the announcement or advertisement of the meeting does not state it. The gentlemen signers who were led to ask for information upon anæsthesia were probably not aware that they were invited to embark in a reconsideration of the ether controversy—a dispute which was thoroughly investigated and practically settled at the time by those who were familiar with contemporaneous facts, and better than it can be by a generation which has grown up since that time.

Wells, acting on Davy's old and well-known hint that his (Davy's) gas, having relieved his own inflamed tooth, might perhaps produce a further surgical insensibility, tried it and found that it sometimes did so, but sometimes did not; in fact Wells made so many notable failures that he abandoned the gas in disgust and embarked in the picture and other business. If a man who was now to have his leg amputated should inhale this gas from a small bag with the entire uncertainty whether it would or would not be of any service in relieving pain—this would illustrate precisely the extent and character of Wells's so-called discovery. The gas proved in his hands to be wholly unreliable, and as such he dropped it as of no practical value. In fact it was hardly known at any time out of Hartford. Besides, an uncertain anæsthesia had been produced long before, and was therefore not new. Wells made the unfortunate mistake of using a small gas-bag, then commonly employed as it now is for exhilarating purposes. Long after ether was introduced the large gasometer now used by dentists was tried, though not by Wells, and it succeeded, but too late; the discovery of an inevitable and safe anæsthetic (the only one of any value), had been made, and as evidence of its value the whole civilized world, which had ignored the gas process as imperfect and unavailing, at once greeted the ether discovery with acclamation.

Wells, like thousands of other would-be inventors of processes and discoverers of truths, narrowly missed a discovery—but he missed it. He only showed that anæsthesia was possible; but this every body knew before. What the world did not know and wanted was a sure anæsthetic, as well as a safe one, and this want was first supplied by ether. When, after a year or two devoted to the picture business, Wells heard of the invention of the first inevitable anæsthetic, he at once wrote to Morton to say that if ether would really do what he claimed for it, it would make his fortune, thus acknowledging the value of Morton's discovery compared with the uncertain experiments practically abandoned by himself nearly two years before. But, at a later period (nearly two years after he had abandoned the gas for picture dealing, and other more promising business), he was unfortunately induced by the advice of persons in Paris, where he then was, to claim the immense discovery. Wells, like many others, preceded ether inhalation with an imperfect and unreliable or dangerous anæsthesia.

Simpson and a dozen others followed with alleged improvements, and all claimed to be discoverers. But ether first produced what was never known before, and what has not been materially improved upon since, an anæsthesia at once inevitable, complete and safe.

This is what the world is grateful for. These points constitute the discovery of modern anæsthesia; and more than this, I hold that the uncertain anæsthesia by nitrous oxide, which was all that Horace Wells had produced before the discovery of ether inhalation, was then practically, and would be even now, of no value to the surgeon.

Finally, it may be added that Wells was not even the one who improved the gas process and inaugurated the modern and comparatively successful system of the dentists, by substituting the large gasometer for his own small and insufficient gas-bag—thus making nitrous oxide what it has since become as an anæsthetic, viz., useful in dental and short operations, though far inferior to ether, and even dangerous in longer ones.

If the above hasty review of the early history of anæsthesia is of any service to you, it is at your disposal.

Your obedient servant,
Henry J. Bigelow.

DRAWING-ROOM DRUNKARDS.—In a recent paper read before the Irish College of Physicians on this subject, Dr. Alfred H. McClintock says: "It is matter of notoriety that the immoderate use of diffusible stimulants has greatly increased of late years, among classes whose education and social condition should have been sufficient preservatives against this destructive vice. It is well known to physicians, that alcoholism is to be met with among the occupants of drawing-rooms as well as the frequenters of tap-rooms. What has so widely spread this pernicious habit among the present generation, it would be difficult to say. Probably more causes than one have contributed to bring it about. I cannot help thinking that the intense strain put on the intellectual faculties in every profession, trade, and pursuit, the mental competition of these days, must create or foster an appetite for diffusible stimulants. Nervous exhaustion craves for the alcoholic stimulus; whereas physical or muscular exhaustion will more eagerly demand solid aliment. Furthermore, to be candid, I must own to a feeling that our own profession is not wholly free of blame in this matter. I know well I am here trenching on delicate ground, but, "*Amicus Plato, amicus Socrates, magis amica veritas,*" and I strongly suspect that the modern treatment of disease by the free use of stimulants, though fulfilling an important therapeutic indication, has occasionally developed a morbid habit or taste, eventuating in moral and physical disease of an incurable kind. I would qualify this, however, by adding that the declaration of inebriates themselves on this point is of no value whatever, as they are notoriously untruthful, and are always but too glad to throw the blame of their evil habit on the physician or surgeon.

"Nearly all the cases of alcoholism which have fallen under my immediate observation were females of the better class in society. All, with scarcely an exception, concealed the habit they had acquired of drinking to excess, so that it often needed a lengthened investigation and a careful analysis of all the symptoms, before any positive conclusion, as to the real cause of the patient's condition could be arrived at.

"All sought medical advice on account of some derangement belonging to the alcoholism, though apparently not themselves recognizing the source from whence their ailments sprang. I should qualify this by saying that a few were brought by friends who had no suspicion of the patients' habits. The intoxicating liquors taken varied a good deal, viz., brandy, gin, champagne, port, sherry, whisky, ale, porter, and, in one case, tincture of ginger—of which her daily allowance, for a length of time, was one pint. This unfortunate lady, who moved in a high circle, and was what is ordinarily called a strong-minded person, eventually died of jaundice, enlarged liver, and ascites. It is very well known that, where the ordinary spirit cannot be obtained, the victims of this passion will not hesitate to drink eau-de-Cologne, lavender-water, sal volatile, compound spirits of lavender, and, in fact, any spirit they can lay their hands on. Most of us here have known, or heard, of the museum porter at one of our schools of medicine, who used to drink the spirits of wine off the anatomical preparations, when he had not the means of buying a more potable description of alcohol. In justice to his palate, I must add that this was before the methylated spirits came into use.

"The ingenuity displayed by many of these individuals to hide the vice, and elude the precautions for keeping away the much-coveted drink, is sometines most curious. For example, a lady with this propensity very strong, was strictly confined to one room by her family, who allowed nothing to enter without its being carefully searched for the contraband article; nevertheless, in spite of all these precautions, she managed to have spirits conveyed to her, not, indeed, in a bottle, jar, or jug, but in the undisguised and unsuspected pôt-de-chambre!" —*London Medical Record.*

SPONTANEOUS CHANGES IN EGGS.—M. V. Gayon, in a communication to the Academy of Sciences of Paris, states that the subject of the putrefaction of eggs has been the subject of numerous important, but sometimes contradictory, experiments. It is, however, very generally admitted that eggs not shaken, neither ferment nor putrefy. 2. That eggs shaken, undergo these alterations within a month. 3. That in no case where putrefaction has taken place are the least traces of organized beings, either animal or vegetable, discoverable. Hence, according to Pasteur, this stands in opposition to the proposition that the destruction of organized matter, and its return to the mineral kingdom, are acts correlated to the development and multiplication of organized beings. Struck with the exceptional nature of this occurrence, M. Gayon has undertaken fresh experiments on the spontaneous putrefaction of eggs, and has obtained results opposed to the above proposition. He finds that, in exposing to ordinary air, at a mean temperature of 25° C., eggs that had not been shaken, some do and some do not putrefy. Again, amongst eggs that had been shaken and similarly exposed some do and some do not putrefy; in the latter case remaining good for several months. Whenever the eggs remain good no trace of organisms could be discovered; on the contrary, in every instance in which putrefaction occurred, numerous microscopic organisms of the family of vibrios, as well as various moulds, were found. The question naturally suggests itself, whence do these organisms come. And he thinks it reasonable to conclude that, in view of the different effects observed in eggs placed under the same conditions, the germs of the organisms that are subsequently found in them preëxist, and in them alone, and that such germs may gain entrance in the oviduct.—*Lancet,* April 12, 1873.

Correspondence.

Messrs. Editors,—A number of leading men in New York lately appeared as subscribers to a request to Drs. Sims and Doremus for "information" on the "subject of anæsthesia," and this announcement was extensively circulated in the New York papers a few days since.

The gentlemen who were thus led to ask for "information" were not generally aware (so I am told by at least one of their number) that the main purpose of the meeting was to announce and urge Horace Wells as the discoverer of anæsthesia. The event proved this to be the fact. The whole proceedings seem to have been "cut and dried" to this end. Full reports appeared in the papers of the next day, with illustrations of the scene and actors in the pictorial papers, while the editorial of one paper at least stated that the controversy had been finally settled by Drs. Sims and Doremus.

The meeting failed to accomplish its purpose. The leading papers pronounced themselves in no undecided manner in opposition to this attempt to make Wells the discoverer. Apart from the able letters from Dr. Henry J. Bigelow in the *Tribune* and also the *Times*, the *World*, in a lengthy editorial, denounced Dr. Sims's unfairness and charged him with a "discreditable perversion of the truth of history." While the *Evening Post*, in more than usually decided editorials, analyzed the claims in the same light. May I particularly call your attention to these editorials, here enclosed, and also that of The *World*.*

But aside from all this unexpected and decided opposition in the editorials of non-medical journals, to Dr. Sims's plan of obtaining a snap-judgment from the laity, were the views of the medical profession. By some of these in New York I found that the occasion was viewed as involving an unprofessional display and publicity, especially as there exists no reason why either of the physicians mentioned should assume the position of experts in a knowledge of the anæsthesia discovery.

I would again call your attention to the prompt criticism which the carefully arranged attempt of Dr. Sims met with in the editorials of leading public journals of New York, as showing the direction in which public opinion is drifting in that city. I enclose to your address the newspapers mentioned.

Very respectfully your obedient servant, Wm. J. Morton, M.D.

No. 1 Park Square, Boston, May 31st, 1873.

Messrs. Editors,—In the Journal of May 15th, it is stated, in the article on resection of the hip-joint, that the first operation in this country was done by Dr. H. J. Bigelow, Feb. 21, 1852.

This is a mistake. My brother, Oliver D. Wilcox, M.D., of Easton, Pa., now deceased, performed the operation July 16, 1849, upon Richard Bell, of Easton, Pa., a brick-mason, about forty years of age. The disease was far advanced, the head of the femur being fully one half destroyed by caries and the patient much reduced. I cannot say if the acetabulum was involved. The patient made a good recovery in about three months' time; and, a month later, was actively engaged in his trade as master mason. The case was never published. C. A. Wilcox.

Uxbridge, Mass., May 19, 1873.

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* The papers referred to are the *New York Times*, May 22d and May 28th, the *Evening Post,* May 26th and May 29th, the *World*, May 25th, and the *Tribune*, May 24th.—Eds.

Medical Miscellany.

THE Boylston Prize Committee has awarded a prize of $150 to D. F. Lincoln, M.D., of Boston, for a dissertation on "Electro-Therapeutics;" and one of like value to William C. Dabney M.D., of Charlottesville, Albemarle County, Virginia, for a dissertation on the "Value of Chemistry to the Medical Practitioner."

MODERN INDUSTRY.—A Vienna journal contains the following announcement. "Anna Agrikol, sick nurse, watches dead bodies, repairs straw chairs, applies leeches, and makes pastry desserts, and delicacies."

PULVIS SULPHURIS COMPOSITUS.—Take of sulphur in fine powder, 30 parts; bitartrate of potassa, in fine powder, 60 parts; carbonate of magnesia, in fine powder, 25 parts; sugar, lump, in fine powder, 30 parts; oil of fennel, 1 part. Mix.—*The Pharmacist.*

THE NEW HEALTH DEPARTMENT OF NEW YORK.—Under the new charter, the Health Department will consist of two medical and two non-medical commissioners, the President of the Board of Police to be one of the latter. The Bureaux of Registration and Sanitary Inspection are to be continued.

WE hinted, some time ago, at the propriety of a party for the prohibition of "free pie," but are discouraged by the following extract from the *Nation*.

"It has been discovered in the management of the Holly Tree Coffee Houses, that it is not possible to banish pie from any popular bill of fare in this country. The promoters of some of these useful establishments attempted, in the interest of health, to withhold this seductive compound from their customers, but it would not do, as they are now supplying it. The fact is that even a "movement" against pie would not succeed. If an anti-pie convention were held, it would be "captured" by the bitters and quack-medicine men. The Committee on Resolutions would be composed of Schenck, Drake, Radway, Hostetter, and Ayer. The resolutions would contain no mention of pie whatever, but would in bitter terms denounce dyspepsia and "general debility," and call for "the purification of the blood" and the supply of "tone" to "the system," and the punctual payment of the pensions of the soldiers and sailors. A picture of the goddess Hygeia would adorn the platform, and a nomination to some high office would probably be offered to some noted pie-baker, and the original anti-pie men would then be informed that they were a narrow but honest set of fellows, rather wanting in practicalness, but who had nevertheless "builded better than they knew."

ST. JOSEPH'S HOSPITAL, under the control of the Sisters of Mercy, located corner of Campbell and Pleasant streets, will be opened for the reception of the sick in about a week. Extensive alterations have been made since the purchase of the building, and when thrown open publicly it will be found well adapted for the use it is now to be applied to.

The following gentlemen have been appointed members of the Hospital Staff:—

Director—Very Rev. L. S. McMahon, V. G.
Physician in charge—S. W. Hayes, M.D.
Consulting Physicians and Surgeons—George Atwood M.D., of Fairhaven; J. H. Mackie, M.D.; F. P. Abbe, M.D.
Visiting Physicians and Surgeons—S. W. Hayes, M.D.; G. T. Hough, M.D.; F. H. Hooper, M.D.; H. Johnson, M.D.
Ophthalmic Surgeon—J. J. B. Vermyne, M.D.
[*Evening Standard* of New Bedford, May 31st.]

French Prizes.—The Society of Surgery of Paris has awarded the *Prix Duval* to M. Malherbe for his researches on "The Febrile Condition in Diseases of the Urinary Organs." The Society of Medicine and Surgery of Toulouse proposes as a prize subject for 1874 the following question: "On the purity of the chemical medicines most commonly employed: indicate the most certain and easy tests."

London is now free from smallpox.

NOTES AND QUERIES.

Too good to be kept.—The homœopaths have issued an *ex parte* pamphlet of 60 pages, which they style "Trial, &c." A prominent member of the Massachusetts Medical Society, on reading the pamphlet, and not recognizing its source (as that is concealed), remarked that he thought the *Board of Trial* could have made a stronger case of it! Another member, in similar circumstances, remarked: "Well, I think the Board have shown pretty clearly that expulsion was only *justice*"! If such be the effect of their own version, what would be that of one from the Committee and Board of Trial? M.D.

To "Inquirer."—The Lecture Hall of the Lowell Institute is one of the best *ventilated* halls in the city. Besides unusually large and not very tight windows, it has a constant inflow of fresh air, many cubic yards in a minute, through places prepared for it; and a central exit through the roof of the building, having such strength of current that gas lights are thereby turned from a horizontal to a vertical direction.

The air was so pure in the hall that Prof. Tyndall was obliged to "raise a dust or get up a smoke" in order to successfully perform some of his experiments.

The only complainants known, very few in all, have been over-fatigued or over-sensitive persons, affected by *heat*, when the weather outside was unusually warm, and when there was no artificial heat within the hall, except from the assemblage.

One who Knows.

Married,—At Boston Highlands, June 3, Dr. J. Henry Davenport, of this city, to Miss Elizabeth W. Bacon.

Died,—At Norwich, Vt., on the 4th inst., Dr. Jacob Mitchell, formerly of Chelsea, Mass. aged 70 years 8 months.

Mortality in Massachusetts.—*Deaths in eighteen Cities and Towns for the week ending May* 31, 1873.

Boston, 128—Lowell, 22—Cambridge, 18—Worcester, 15—Charlestown, 13—Lawrence, 13—Fall River, 12—Lynn, 11—Springfield, 10—Salem, 9—Chelsea, 7—Holyoke, 6—Somerville, 4—Milford, 4—Taunton, 4—Newburyport, 3—Haverhill, 2—Fitchburg, 2. Total, 283.

Prevalent Diseases.—Consumption, 58—pneumonia, 19—cerebro-spinal disease, 18—scarlet fever, 11.

Deaths from cerebro-spinal disease:—Boston 4, Cambridge and Worcester 3 each, Chelsea 2, Lowell, Charlestown, Lawrence, Fall River, Holyoke and Somerville 1 each. Deaths from scarlet fever:—Boston 7, Lowell 2, Worcester and Salem 1 each.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, June 7th, 134. Males, 70; females, 64. Accident, 4—abscess, 1—apoplexy, 1—aneurism, 1—disease of the bladder, 1—bronchitis, 4—inflammation of the brain, 1—congestion of the brain, 2—disease of the brain, 8—cerebro-spinal meningitis, 3—cancer, 3—cholera infantum, 3—cyanosis, 2—consumption, 18—convulsions, 4—croup, 1—debility, 2—diarrhœa, 1—diphtheria, 1—exhaustion, 1—erysipelas, 3—scarlet fever, 6—typhoid fever, 2—homicide, 1—disease of the hip, 2—disease of the heart, 5—hæmorrhage, 2—indigestion, 1—inflammation of the knee, 1—disease of the kidneys, 6—disease of the liver, 1—congestion of the lungs, 4—inflammation of the lungs, 13—malformation, 1—marasmus, 2—old age, 2—paralysis, 6—premature birth, 2—peritonitis, 2—puerperal disease, 1—pyæmia, 1—rheumatism, 2—suicide, 2—scalded, 1—teething, 2—tabes mesenterica, 1—trismus nascentium, 1—whooping cough, 2—unknown, 2.

Under 5 years of age, 45—between 5 and 20 years, 12—between 20 and 40 years, 32—between 40 and 60 years, 24—over 60 years, 21. Born in the United States, 86—Ireland, 35—other places, 13.

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Original Communications.

THE MODERN OPERATION FOR CATARACT, AS MODIFIED BY M. DE WECKER. WITH A PARTIAL TRANSLATION FROM HIS ANNUAL HOSPITAL REPORT.

By Hasket Derby, M.D., Boston.

Since the flap extraction of cataract has been so largely superseded by the peripheric linear method of von Graefe, Dr. Liebreich, of London, has brought prominently forward another operation, which now generally bears his name. He makes a cut throughout in the cornea, curved, about midway between its horizontal meridian and its upper or lower edge, and, having ruptured the capsule, extracts the lens without removing any portion of the iris.

The operation of von Graefe consists, as is well known, in a nearly linear incision at the upper sclero-corneal junction, in the excision of a piece of the iris, and the subsequent extraction of the lens. Dr. de Wecker makes a larger and more curved incision, which, "instead of being linear, forms a small flap two millimètres high." This done he follows, step for step, the method of von Graefe; and may be said to do his operation with a comparatively slight variation as well as equal results. These last words are justified by the following quotation from de Wecker's annual report.

"M. de Wecker's section does not afford, as regards the number of cures obtained, any larger figures than those obtained by the method of von Graefe. In spite of its curve, the section made use of by our master (it is the assistant of de Wecker who writes) allows a coaptation of the lips of the wound as close as that observed in the method of the celebrated ophthalmologist of Berlin, and, like the latter, results, in a great majority of the cases, in a union by first intention and an immediate and total cure, as may be seen by a comparison of the statistics which represent the complete success of the two operators."

The methods of von Graefe and de Wecker belong to the same family and may, for all practical purposes, be considered as the same. The operation of Liebreich is entirely distinct. The lines between these opposing systems are fairly drawn. On the one hand, we have a cataract made to emerge through an artificial pupil and a peripheric linear or curved incision; on the other, an extraction through the natural contracted pupil and a median corneal cut. The relative advantages of these two methods are now engrossing the attention of ophthalmic surgeons. On the side of Liebreich, most plausible assertions have been made. On that of von Graefe and de Wecker, numerous carefully prepared statistical tables have been compiled, showing a larger percentage of success than has hitherto been known to be attained. Until answering and more favorable figures have been brought forward by the upholders of the new operation, its value must, of course, be considered as undecided.

Meanwhile I desire to present, for the benefit of those interested in such matters, a portion of the excellent annual report* of de Wecker's clinique in Paris, giving his reasons for modifying the peripheric linear extraction, as well as some practical and novel hints regarding preparation for the operation and after treatment.

(Translation.)

The best means to employ in order not to provoke a prolonged irritation of the portion of the ciliary body adjoining the wound, is to keep farther away from it than von Graefe did. Prof. Horner, a particularly experienced and prudent operator, wrote recently to Dr. de Wecker:

"Nothing appears to me to more surely avoid the dangers of healing-in of the iris (irido-cyclitis and even sympathetic iritis, which I have been unfortunate enough to observe twice) *than a less peripheric incision* and the non-use of atropine before the operation; I have no doubt but that your experience has been the same."

Our first care, then, should be to avoid all healing-in of the extremities of the sphincter of the iris at the corner of the two commissures. The iridectomy once performed, every portion of this membrane ought to occupy the same position that it did before the creation of the artificial pupil.

Moreover, numerous observations have proved to us the advantage, alluded to by the Zurich professor, of not dilating the sphincter of the iris before proceeding to extraction. If the instillation of atropine be avoided, it can be seen that this membrane returns much more readily into position after the excision of one of its parts. M. de Wecker, accordingly, makes a more sparing use of this mydriatic. During the year 1871, he began to give it up after the operation in the majority of cases, in order to avoid the irritation of the conjunctiva that comes on in a certain number of individuals.

For nearly a year, all extractions at the clinique have been performed without the previous production of mydriasis. In fact, as has been noted in the foregoing tables, we only use this agent when the aqueous humor is somewhat cloudy, when it contains masses of corticalis, and when the iris threatens to inflame.

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* Ophthalmological Clinique of Dr. de Wecker at Paris. Statistics of the operations performed during the year 1872. By Dr. Georges Martin, Chef de Clinique. Paris, Adrien Delahaye.

A combined extraction* is often accused of being a complicated method, and involving for the patient an artificial pupil. But in reality such an operation makes no unreasonable demand on the skill of the surgeon. It is unjust to attribute to an operative method those drawbacks which are not inherent in it, but are solely due to a want of accuracy in the performance.

If a coloboma of the iris interferes with vision, it is in a far smaller proportion of cases than is generally supposed; the majority of patients easily learn, at the end of a certain time, to disregard it by slightly drooping the upper lid.

And, as the escape from the slight inconveniences entailed by a solution of continuity of the fibres of the iris is purchased at the price of several suppurations, no operator should hesitate to choose that method which the interest of the patient demands. It is in establishments like those ruled by M. de Wecker, where hundreds of extractions occur in a year, that the choice of that method that leads most certainly to a cure is most imperatively demanded.

In a simple extraction, the larger portion of the cataractous mass can emerge through the natural pupillary opening, but it is almost impossible for all the cortical layers imprisoned behind the iris to follow the same road. Moreover, setting aside clinical experience, anatomy and mechanics alike demonstrate that a *complete* delivery of the crystalline is only possible by a combined method, unless the cataract be extracted in its capsule, which would be an unhappy reversion to a process considered dangerous, under many circumstances, by nearly all the operators who have employed it.

The present tables give seven entire failures, figures that cause just pain to an operator, even when met with among 217 extractions. How great, however, would have been nearly every week the burden of care if the twenty-two suppurations, that would have resulted from an equal number of extractions by the old flap method, had to be undertaken. Does not, moreover, the surplus of fifteen successes attending the method of curved combined extraction more than compensate for the slight amount of dazzling experienced by a few stray patients?

Remark that the proportion of ten per cent. of failure does not attend flap extraction solely; the new methods without iridectomy, elaborated though they be, lead to an equally inferior result, as the most recent statistics of the method of Weber prove.

Despite all the above-mentioned precautions, the most dexterous operator will always happen on a certain number of patients in whom suppuration is inevitable.

This complication, in very many cases, is impossible to foresee, and cannot find its explanation in a morbid state of the fundus oculi. The most serious affections of the choroid and vitreous humor (posterior staphyloma, disseminate choroiditis, floating bodies in the vitreous, partial detachment of the retina) seem to have no unfavorable influence on immediate accidents, but rather on those which occur after a certain lapse of time.

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* i. e., extraction prefaced by an iridectomy.

It is safe to state that the majority of suppurations which occur the second or third day after the operation, are due to an irritation of the conjunctiva.

When the mucous membrane is inflamed, either primarily or in consequence of chronic lachrymation, of slight dacryocystitis, or of blepharitis, the pus corpuscles emigrate towards the lips of the sclerocorneal wound, and the adhesive process is interrupted and fails to induce a union by first intention. In another series of cases, the direct cause eludes observation; the organ is probably the seat of a congestive condition which, stimulated by operative interference, encourages the exit of white blood corpuscles; these latter, placed between the edges of the section, interfere with the developement of the phenomena of cicatrization.

Governed by this theory at the clinique, whenever there is the least reason for fearing a suppuration of the lips of the wound, we have recourse to a remedy which has been adjudged useful in preventing the passage of leucocytes, and incapable of interfering with the phenomena of proliferation. We speak of the chlorhydrate of quinine, recommended by Prof. Nagel several years ago to meet the inflammatory complications experienced by some patients.

If, at the time of the second dressing, which generally takes place twenty-four hours after the operation, the conjunctiva is observed to be the seat of a considerable secretion, the aqueous humor to have lost its transparency, the segment of the cornea adjoining the wound to be invaded by a grayish tint (differing from the opaline color which follows a simple contusion), and if, finally, the conjunctiva presents a slight tumefaction, we prescribe immediately a solution of chlorhydrate of quinine.* The wound is once an hour carefully bathed with this preparation, a certain quantity of which is allowed to trickle down, drop by drop, from a slight distance above it. After this application, a drop of atropine (about gr. i. to ʒ iij.) is instilled between the lids, in contact with which is constantly kept a compress soaked with the solution of quinine. This treatment is only suspended at night, during about six hours. The patient's sleep is favored by the administration of hydrate of chloral in doses of from gr. xxx. to gr. xlv. During this time, unless the suppuration is excessive, the eye is protected by a slightly compressive bandage.

By means of the quinine and the atropine, an eye threatened with panophthalmitis can be saved one time in three, and in nearly every case suppuration can be limited to the cornea. A fact worthy of notice is that the salt of quinine induces a nearly immediate cessation of the acute pain experienced by the patient, and reduces it to a simple sensation of warmth. We see, therefore, that, though the solution of chlorhydrate of quinine does not invariably arrest the disease, it offers the immense advantage of disembarrassing in many cases the loss of the eye, of acute suffering, and of nearly complete atrophy (phthisis) of the operated organ.

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* R. Quininæ chlorhydrat., gr. vi.;
Aquæ destill., dr. xv. M.

As has been demonstrated, this system of medication and the operative process, on which we have so earnestly dwelt, grant an amount of security procured up to to-day by no other method of treatment. This operation allows the surgeon to quit his patient, divested of uneasiness as to the result of the extraction. Entire assurance may be felt when the following principles have been complied with:—

Easy and complete evacuation of the nucleus and corticalis.

Restoration to its position of the internal sphincter of the iris.

Perfect coaptation of the wound as well as of the conjunctival flap.

(End of translation.)

I will add a brief *résumé* of the 217 extractions included in de Wecker's report of this year.

Twenty-five cataracts were not fully ripe. Five patients had diabetes. Vitreous was lost in twelve cases, all of which recovered with a vision of at least $\frac{1}{5}$. Iritis occurred six times. Seven eyes were entirely lost. The percentage of success was thus 96·88. The year previous it was 96·52.

Vision amounted in 19 cases to $\frac{20}{20}$
" 58 " " $\frac{2}{8}$
" 49 " " $\frac{1}{2}$
" 69 " " $\frac{2}{5}$
" 17 " " $\frac{2}{7}$
" 10 " " $\frac{1}{10}$
" 10 " was unrecorded;

these patients having their examination deferred until they should return for the operation on the second eye.

" The figures obtained by testing the vision, joined to those representing the proportion of cure, offer in themselves convincing testimony as to the superiority of extraction by the small peripheric flap, combined with iridectomy, over every other method."*

Such cases give no uncertain sound. Their results challenge comparison, and are not to be met by vague and unsupported laudation of a new and different method. That the pure or modified operation of von Graefe is never to be improved upon, I do not for an instant maintain. But what is claimed to be an improvement upon it must rest, in this day and generation, upon a basis of solid facts, and be known by its fruits.

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* Quotation from Report.

Progress in Medicine.

REPORT ON SURGERY.*

By J. Collins Warren, M.D., Boston.

The Examination of the Pelvic and Abdominal Organs by the Introduction of a portion or the whole of the Hand into the Rectum. By Prof. Gustav Simon, Heidelberg. *(Deutsche Klinik*, No. 46, 16, Nov., 1872.) This was the subject of an address delivered before the Congress of German Surgeons, and was afterwards published in the *Archiv für Klinische Chirurgie*, B. xv., and in the paper above quoted. Prof. Simon has not only undertaken, but has most fully demonstrated the possibility of introducing the whole hand into the rectum, and some of the fingers even into the sigmoid flexure, *without rupturing the fibres of the sphincter or producing an abrasion of the skin at the margin of the anus.* The contractile power of the muscle is usually restored within twelve hours, and there appears to be but little pain or discomfort resulting from these manipulations. The patient, after being chloroformed, is placed either in the position for lithotomy or upon the side, with the knees drawn up to the abdomen. If it is necessary to penetrate high up into the abdominal cavity, the thorax must be bent upon the abdomen in order to shorten, as much as possible, the long diameter of the latter. Complete anæsthesia must be produced, in order to relax as much as possible the sphincter muscle. Before introducing the hand, the rectum must be thoroughly syringed out. The whole hand being freely oiled, two fingers are first introduced, then four, and next the thumb; then, by slow pressure, accompanied by a gentle rotary movement, the whole hand is finally passed through the sphincter into the rectum. Considerable force is necessary in order to accomplish this; and yet, with care, rupture of the skin or the fibres of the muscle may be avoided. In very rare cases, however, it is necessary to cut through the muscle at its posterior border in order to avoid tearing, a cut always healing quite rapidly.

The anus, when stretched to its greatest width, being then about twenty-five centimetres in circumference, is still but a narrow entrance to the roomy cavity of the lower two thirds of the rectum, which fairly fills the lower part of the pelvis. The width of this cavity is from twenty to twenty-five centimetres, but it narrows rapidly at the upper third, so that, when the rectum is distended, a sort of cul de sac is formed at the upper extremity, and it is frequently quite difficult to find the continuation of the gut into the sigmoid flexure. It is not possible to introduce more than four fingers into the sigmoid flexure without rupture of the intestine. The narrowness of the intestine is not the only obstacle to further progress, but the peritoneal ligaments, which surround the upper portion of the space of Douglas, effectually prevent the passage of the hand. With the fingers in the sigmoid flexure, it is possible to reach a few centimetres above the umbilicus and to touch the whole anterior abdominal wall on both sides below this point. If the upper part of the rectum prove unusually narrow, we can press with the fingers the middle portion into and through the upper border of the space of Douglas, thereby inverting it. This enables the examiner to reach the integuments somewhere between the umbilicus and pubes. By this method, it is possible to reach at least fifteen centimetres further into the abdominal cavity than by any previous method of examination. Moreover, the fingers are separated from the part to be examined only by the thin intestinal wall instead of the thick and unyielding walls of the abdomen. This method of examination is adapted to all important cases, when other methods have failed to satisfactorily determine the diagnosis. It can be employed without disadvantage immediately before a surgical operation. The character of diseases of the intestines as far as the sigmoid flexure, and of disease of the pelvic organs, are more readily determined by this than by the old method. Also all tumors existing in the lower half of the abdominal cavity. The readiness with which any change in the diameters of the pelvis can be determined, makes it especially advantageous in midwifery. The plan of many surgical operations might be materially changed; for instance, strangulated hernia might be reduced by traction from within, foreign bodies could readily be removed from the rectum by the hand alone. Prof. Simon enucleated a fibrous tumor of the uterus and pushed it up into the abdominal cavity; and had it been necessary to extirpate it, it could easily have been pressed firmly against the abdominal walls. In order to show how slight the disturbance is after such an examination, we quote the last paragraph of this interesting article:—

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* Second semi-annual Report.

"A number of physicians lately visited Heidelberg in order to learn this method of examination. Five patients were submitted to them for this purpose, two with vaginal fistulæ (one of whom had deformity of the pelvis), one with carcinoma and one with fibroma of the uterus, and, finally, one with an ovarian tumor. Each patient was examined at least three times, and three of them five times, and that, too, by men whose hands measured from twenty-five to twenty-six centimetres. The rules given above having been carefully observed, that is, on gradual pressure with the hand well oiled, the skin was torn only in one case, and in that very superficially. After the examination, the patients suffered no discomfort beyond nausea from the chloroform, not even the slightest pain in the abdomen, and the next day continence was so completely restored that an injection of water into the rectum was retained."

The Antiseptic Method in Surgical Dressings.—We presume that it is very generally considered, in this country, that the antiseptic system of Lister has been virtually abandoned, and that, with the exception of the employment of certain so-called antiseptic lotions and applications, no further attempt is now made to prevent decomposition taking place in the fluids collecting upon wounded surfaces. Indeed, the system has, with the exception of rare instances, not been thought worthy of a fair trial. We doubt if there has been a single surgeon of any prominence in this country who has undertaken to do it this justice, and yet when we read the testimony of not one man alone, but of numerous observers in England, Germany and elsewhere, as to the results that have been obtained by a careful observance of the details necessary to preserve a wound in a perfectly antiseptic condition, it is hard to believe that such a system must be considered entirely impracticable and worthless. We have before us a copy of a lecture delivered at a meeting of the Military Medical Society of Berlin (*Volkmann's Klinischer Vorträge*, No. 52) by A. W. Schultze. This surgeon, having witnessed the effects of attempts at this form of treatment in the Charité Hospital, visited Lister's wards, and gives, in his lecture, the result of his observations of this treatment in England. It is absolutely necessary, he says, to have a correct idea of the theory on which this treatment is based in order to be able to carry it out properly.

"The antiseptic treatment of Lister does not consist simply in the use of an antiseptic; it is not merely a disinfecting treatment, but, as Lister himself distinctly states, 'a treatment which has the effect of preventing the occurrence of decomposition in the parts.' Lister's theory is, that an unfavorable state of the wound is caused by an abnormal condition of its secretions, a condition which is brought about by elements that are introduced into the wound from without. Lister's plan has simply for its object to prevent the action of these injurious agencies."

Without going any further into the theoretical part of this subject, for which we refer the reader to the lecture quoted, and also to a lecture published by Lister in the *British Medical Journal* of August 26th, 1871, we will state briefly the system as at present carried out at Edinburgh, as given us in Dr. Schultze's account.

During an operation, all access of dust or organisms to a wound is prevented by employing an atomizer, which keeps the parts enveloped in the spray of a solution of one part carbolic acid to one hundred water. The solution is used as weak as possible, so as to produce a small amount of irritation, and yet be strong enough to destroy all organisms with which it comes in contact. Lister prefers to employ this in the form of spray at the time of the operation rather to wash the wound out with it afterwards, which latter, however, is thought sufficiently protective by those who otherwise carry out his system very carefully. The antiseptic catgut ligature is used for securing the arteries, while the spray plays over the wound. The "catgut" employed is taken from the intestine of the sheep, and is steeped for a couple of months in a solution of one part carbolic acid, five parts water and five parts oil. This prevents swelling and softening of its substance when subjected to the action of fluids. The ends of the ligatures are cut short and are left to be absorbed, "organized," disintegrated, or to whatever changes they may chance to be subjected. Experience shows that they do their work properly, even when applied to the largest vessels, and cause no irritation by their presence. The catgut is not adapted for sutures which are subjected to tension, in consequence of which the catgut becomes softened and stretched. Carbolized silk is therefore used for this purpose. White silk is dipped into a solution of melted wax mixed with one tenth the amount of carbolic acid. As the wound has been irritated somewhat by the carbolic spray, there is naturally an increased secretion. To prevent any tension, a small piece of drainage tube is inserted at one end of the wound to enable these fluids to be discharged. The wound is now covered with some unirritating substance of sufficient density to prevent the penetration of vapor of carbolic acid from the dressings which are placed outside of it. Oiled silk, varnished with copal varnish, was found to serve this purpose. This protective covering, he says, should be perfectly bland

and unstimulating in its own substance, and also quite impermeable to the antiseptic. Above this protection the dressing is applied, which is intended to prevent the entrance of septic substances. For this purpose, the antiseptic gauze is used. This Lister describes as "a loose cotton fabric, the fibres of which are impregnated with carbolic acid securely lodged in insoluble resin, which holds the carbolic acid with remarkable tenacity, while at the same time a little paraffin is added, to prevent the adhesiveness which the mixture of carbolic acid and resin would otherwise possess." Resin five parts, paraffin seven parts, crystallized carbolic acid one part. This gauze is folded into eight thicknesses, and cut large enough to overlap the wound a hand's breadth in every direction. Inasmuch as the secretions of the wound find their way readily through the meshes of this dressing, a piece of waterproof Macintosh is placed beneath the outermost layer of the gauze, and the fluids are obliged to pass beneath the entire extent of the covering before coming in contact with the air. This dressing is held firmly against the wound by bandages of the same gauze.

The dressing is allowed to remain on for two or three days, according to the amount of secretion. When the dressing is changed, the wound is subjected to the spray, or a piece of linen compress soaked in a weak solution of the acid is placed over the wound until the new dressing is applied.

Schultze is convinced that nothing but a careful observance of all the details laid down by Lister can be looked upon as antiseptic treatment. In regard to the results of this treatment, Lister's mortality, after amputations, has greatly diminished. In Glasgow, before the antiseptic period, he had 16 deaths in 35 cases—during this period, 6 deaths in 40 cases. In his two years of service, at the Edinburgh Infirmary, he had not a single case of pyæmia, gangrene or erysipelas, although Simpson's statistics (*Lancet*, Nov. 2, 1867) show very unfavorable results for these wards in 1864–65. The building is old and badly ventilated. Lister's method is pretty generally adopted in Edinburgh. It also has supporters in Glasgow and Dublin, but not in London. The catgut ligature, however, is very generally considered in Great Britain a great improvement. In Liverpool, Bickersteth, a follower of Lister's plan, has used the catgut on the external iliac, and on the carotid successfully. In Manchester, Dr. Schultze saw in Lund's wards, where this system is adopted, a Syme's amputation healed without suppuration, a hip joint healed by first intention with the exception of a very small fistulous opening, also an amputation at the shoulder joint and of the thigh healing in the most satisfactory manner.

A correspondent from Paris writes us that Guérin's cotton wool has superseded every other kind of antiseptic dressing in that city. He says, "It looks very shocking to the surgical eye, but the results are good here; the application is not easy, and if badly executed, the result of the dressing is very bad. If you have a case of hand badly mangled by machinery, try cotton wool. Remember Guérin's rule—*il faut mettre trop d'ouate et il faut serrer trop fort*. Leave the dressing on a fortnight or three weeks, and then use simple dressings."

It may be remembered that at one time Lister tried cotton wool, which had been subjected to the vapor of antiseptic substances, recognizing its power to act as a filter to the air dust, as shown in Tyndall's experiments, but afterwards abandoned it.

In this connection, it may be of interest to allude to some experiments by J. Rosenbach, on the influence of carbolic acid as a preventive against putrid and pyæmic infection in animals *(Allgemeine Medicinische Central. Zeitung,* Feb. 15th, 1873). This experimenter injected subcutaneously into dogs and rabbits pus alone, or in combination with carbolic acid. Fresh, laudable pus, when injected in sufficient quantity, produced phlegmonous inflammation, general malaise and increase of temperature of several days standing, and finally, in most cases, death. The addition of five per cent. carbolic acid, to the same kind of pus, producing a flocculent coagulation, resulted in the formation of an abscess without constitutional symptoms. An addition of only one-fourth per cent. carbolic acid was without effect. If one per cent. was added, in many cases there was an effect upon the pyrogenous (fever producing) action of the pus.

Reports of Medical Societies.

THE BOSTON SOCIETY OF MEDICAL SCIENCES. E. WIGGLESWORTH, JR. M.D., SECRETARY.

Nov. 26th, 1872.—*Rhus Venenata and Rhus Toxicodendron.*—Dr. White read a paper upon the poison of rhus venenata and rhus toxicodendron, and exhibited in this connection a large number of fine illustrations of the appearance of these and kindred plants. In reply to questions, Dr. White stated that the chemical nature of the first poison was unknown; that blackwash modified the appearances and shortened the duration of symptoms; that there was no periodicity of return, but that attacks of eczema often occurred subsequently at irregular intervals.

Lymph Spaces in Fasciæ.—Dr. H. P. Bowditch then spoke of the lymph spaces existing between the tendinous fibres of fasciæ, and the connection of these spaces with lymphatic vessels, citing Ludwig, Schweigger Seidel and Dr. Genersich, the researches of the last of whom have shown that the fascia, in virtue of this structure, plays a very important part in keeping up the flow of lymph through the lymphatic vessels. Various experiments were described going to prove that passive movement of the limbs, and, to a less degree, galvanization of the muscles, increased this flow, which in some measure accounts for the success of methods of treatment like the Swedish movement cure. For the injection of lymph spaces, Dr. Bowditch preferred the turpentine solution of alkanine, as watery or alcoholic fluids tend to produce swelling or shrinking of the tissues. The injection should be made in several places, with a hypodermic syringe inserted obliquely into fascia, carefully cleaned and stretched over the neck of a bottle, near the border. Extravasations ensue, which have dispersed themselves throughout the finest lymph-spaces when the fascia, unremoved, has become dry. In this way, two, or even three, layers of lymph spaces, lying between as many different layers of tendinous fibres, may be clearly demonstrated. The dried fascia may be mounted in Canada balsam, between glass plates.

In answer to Drs. Fitz and White, Dr. Bowditch stated that fine injections into the small vessels of the brain would pass from the veins into the lymph vessels.

Portable Microscope for the Lecture Room.—Dr. White exhibited some microscopes, arranged by him for passing from hand to hand during a lecture; instead of a stand, the slide being adjusted to the frame and thoroughly screwed down. The coarse adjustment was made with the tube as in all Nachet's microscopes. The fine was made by means of a collar, and twisting the tube slightly. By means of these microscopes, time is saved, and points are shown while being described.

Cornea prepared with Gold.—Dr. Quincy showed some specimens of a cornea from a rabbit, they having been covered with gold, according to Klein's method. Dr. Dwight alluded to the beaded appearances of the finest nerves, well shown in the specimens. He had been for some years conversant with these appearances, and had attributed them to an unequal precipitation of the gold. Dr. Amory inquired if these were a constant phenomenon.

Dr. Dwight said no, but that they were found at times in the smallest nerves.

Dr. Bowditch thought that they were, perhaps, the same as described by Max Schultze in the ultimate fibres of the axis-cylinder.

Jan. 28th, 1873.—*Vegetable Parasites.*—Dr. White showed, under the microscope, some hairs from a patch of tinea tonsurans, some three inches in diameter, upon the head of a young girl. Also some stumps of hairs, about one eighth of an inch in length, from around the periphery of a wholly bald patch with a healthy surface, upon the back of the head of a young man seen to-day for the first time; the patch, some two inches in diameter, having been noticed a fortnight since and having increased during that time by one quarter of an inch. The free ends of the stumps were splintered, but at the extreme end there existed upon every hair a dark looking cloud composed of minute cells resembling spores of a fungus. Dr. White had never seen fat globules in this position, and not elsewhere as well. The appearances resemble what, in three or four cases, he had found in alopecia areata. The general appearance, also, of the disease in this case was that of an alopecia areata, except, as regards these few hairs in the periphery, where it would seem as if the fungus acted higher up. He believed that in the majority of cases alopecia areata is not parasitical, but that in others it is.

Dr. Edes thought that this would make two clinical diseases.

Dr. White considered them alike externally and clinically, though pathologically two diseases.

Dr. Bowditch asked if the presence of spores here might not be accidental.

Dr. White said that the appearances here varied from those of other spores, and yet were alike in cases where they were found.

Dr. Bowditch inquired if the development might not depend upon varying conditions.

Dr. White responded that he did not lay the same stress upon soil which some authors do; that Dr. Bowditch's remarks would apply, also, to other parasitic diseases.

Dr. Fitz asked if the fraying out might not be anterior to the development of spores.

Dr. White stated that the ends of hairs are found broken in other diseases, but not in this way. He considered the outlines here as distinct as is usually the case, and added that the young man had worn, for the last two months, the hat of a friend of whom nothing is known.

Ruptured Membrana Tympani and Perception of high Tones.—Dr. Blake spoke of the case of a young man twenty-five years of age, a student of natural history, who had always heard high tones better than low ones. Two years ago, while practising with a blow-gun, he heard a crack in the left ear which was repeated on a second attempt at blowing. Six months later, he had the same experience without any change in hearing. Six weeks ago, he was exposed to cold and wet, and had some inflammation and congestion of the pharynx, and was awakened at night by a loud throb in the left ear, similar to that experienced when using the blow-gun. An examination showed the post. sup. portion of the membrana tympani to be abnormally thin, the dentritic fibrous tissue described by Gruber being apparently wanting. In the left membrana tympani, this thin membrane had been ruptured by the force employed in shooting with the blow-gun, and the torn edges were united to the descending process of the incus. During the trouble in the throat, the change of atmospheric pressure in the middle ear, caused by swallowing, moved the membrana tympani, and, on the left side, the descending process of the incus attached to it, and by this movement communicated directly to the stapes, so varied the intra-labyrinthine pressure as to awaken the patient with the sensation of a blow upon the head. In the left ear, tones as high as 53,000 vibrations were distinctly heard, the vibrations being conveyed directly from the membrana tympani to the incus, this observation being confirmatory of some experiments previously reported.

Feb. 25th.—*Relative size of Blood Globules in Man and in the Horse.*—Dr. H. P. Bowditch had moistened blood stains with a saturated solution of KO, A, and the diameters of the blood globules, in divisions of the eye-piece micrometer, were as follows:—

Dried ten days on glass.		Dried three to four weeks on wood.	
Horse.	Man.	Horse.	Man.
4	5·5	5	5·5
5	5·5	4	5·5
5	5·5	5	6
5	5·5	4·5	5·5
5	5·5	4	7
5	6		6
4			7
5			
5			
5			
Mean 4·83	5·58	Mean 4·5	6
or ·0063 mm.	or ·0072 mm.	or ·0058 mm:	or ·0077 mm.

The mean diameter of fresh globules of horse = ·0057 mm.; of man = ·0077 mm. according to authorities; though these differ in their statements of the extent of variation in size of the red blood globules of each *inter se.* The truth probably is, that a very large proportion [perhaps 99 per cent.] do not vary perceptibly, but, by careful search, globules may be found varying as much one third above and below the mean. In this connection, Dr. Bowditch spoke of the need of trustworthy medical-expert testimony.

Bibliographical Notices.

Text-book of Physiology, General, Special and Practical. By John Hughes Bennett, M.D., F.R.S. etc. Philadelphia: J. B. Lippincott. 1873. Pp. 606. Small 8vo.

The leading idea pervading this volume, and distinguishing it from other physiological text-books, is the law or generalization of the author, "that the development and growth of organic tissues are owing to the successive formation of histogenetic and histolytic molecules." In other words, the tissues of the body existing at any one time are built up from the molecular débris of previously existing tissues, and in their turn furnish, by their disintegration, a molecular material from which other tissues may be formed. This process is illustrated by a series of figures, representing different stages in the development of the ascaris mystax, where molecular re-arrangements seem to play the principal part.

True to this theory of the molecular origin of the tissues, the author regards pus cells as originating "in the molecular matter of exudations from the blood-vessels." He rejects entirely Virchow's theory of the origin of pus from connective tissue corpuscles, stating that he has never seen a single specimen of inflamed tissue, recent or prepared, in which such an occurrence could be demonstrated, and that German pathologists, firm believers in Virchow's views, have repeatedly failed in their efforts to bring before him microscopic evidence of this mode of pus-formation. The observations of Cohnheim and others on the emigration of white globules of the blood are barely referred to and passed by with the statement that the phenomenon, though carefully looked for by the author and his assistants, has never been observed. In accordance with this same theory, the author ranges himself fairly among the believers in spontaneous generation, even going so far as to describe with some minuteness the nature of the process. He regards the infusoria, vegetable and animal, found in organic fluids during fermentation and putrefaction, as originating "in oleo-albuminous molecules, which are formed in organic fluids, and which, floating to the surface, form the pellicle or proligerous matter. There, under the influence of certain conditions, such as temperature, light, chemical exchanges, density, pressure, and composition of the air and of the fluid, &c., the molecules, by their coalescence, produce the lower forms of vegetable and animal life."

The application of this molecular theory to the phenomena of disease leads the author much farther into the domain of pathology than writers of physiological text-books usually care to venture.

The merit of the work is very unequal in its different parts. Many portions, especially those which have a bearing upon the favorite theory of the author, are clearly and accurately written, while other portions abound in the grossest inaccuracies and give evidence of strange ignorance of the results of modern investigations.

We find, for instance, in the first part of the volume a very good account of the experiments of Rainey and others, showing how cell-like bodies may be formed from inorganic materials. The description of the phenomena of parthenogenesis is also exceedingly good. As well written portions of the book, may also be mentioned the history of the discovery of animal electricity, and the account of the experiments of the Edinburgh committee of the British Medical Association to determine the effect of mercury on the secretion of the bile.

On the other hand we find the subject of animal heat treated in a very unsatisfactory manner. Only two and a half pages are devoted to the question, and no allusion is made to the important part played by the muscles in the production of heat.

In the portion of the work devoted to histology, the singular division of the elements of the tissues into molecular, cellular, fibrous and tubular, leads the author to classify and describe together such totally distinct structures as the dental tubes and the blood tubes. Such a classification can of course only lead to confusion.

As an example of the inaccuracy of statement, which marks certain portions of the work, the description of the chemical composition of muscle may be mentioned. Here we find Prof. Kühne quoted as authority for the statement that "the semifluid, contractile substance of muscle, when isolated from sarcolemma divides into a fluid portion, termed muscle-serum, and a solid coagulum, termed muscle clot or myosin." It is also stated in this connection that muscle-serum contains a form of albumen which coagulates at 30° C., and that the heart is the only muscle which contains inosite.

In the description of the nervous system, the author proposes a strange innovation in the nomenclature. He applies the term "spinal cord" to all those parts of the cerebro-spinal axis which are situated below the corpus callosum, including therefore the corpora striata, optic thalami, corpora quadrigemina, cerebellum, pons Varolii, medulla oblongata and medulla spinalis. "In this way we have a cranial and a vertebral portion of the spinal cord." No reasons are given for the proposed change, and it is hard to see what good would result to offset the confusion which would inevitably follow the disturbance of a long established nomenclature.

An important feature of the work before us is the portion which treats of practical physiology. This is of interest as indicating the practical way in which physiology is taught in the University of Edinburgh. In the first section, devoted to practical chemical physiology, we find a description of methods of analyzing the various tissues of the body, but look in vain for any experiments on the chemistry of digestion, which might very properly have found a place here. It is very satisfactory to notice that, in this portion of the book, the French system of weights and measures is adopted. This is probably to be explained by the fact that this section was written by the author's assistant Dr. McKendrick. In the main body of the book, the English weights and measures are constantly used. We even find a table giving the weight of the human body at different ages in stones and pounds, on the same page with a statement by the author that the *gramme* is the unit of weight now employed by scientific men.

The section on practical histological physiology gives an account of the construction of the microscope and the method of using it, as well as various modes of injecting, staining and preserving the tissues. Here the author takes occasion to extol the small and convenient microscopes of the continental makers, at the expense of the bulky and clumsy contrivances of the English manufacturers.

In the section on practical experimental physiology, also written by Dr. McKendrick, we have, in the words of a recent reviewer in the *British Medical Journal*, rather a descriptive catalogu e of physiological apparatus than a treatise on experimental physiology. It is, however, a recognition of the fact that physiology is an experimental science, and one to be studied and taught in the same way with chemistry and physics. The introduction of a chapter of this sort into a physiological text-book is therefore an important step in the right direction.

The plates of this volume are twenty-one in number, and have on an average some twenty figures on each plate. Crowding and confusion are of course the result of trying to compress so much into a small space.

On the whole, this text-book, being the work of a teacher of considerable experience, and of an original investigator of no small ability, is a decidedly readable work. Many portions of it may be perused to great advantage by the advanced student of physiology. On the other hand, the bias of the author in favor of a particular theory, his apparent ignorance of many important recent investigations, and a too great readiness to accept as conclusive isolated observations of unreliable investigators, render the book unfit to be placed in the hands of beginners. H. P. B.

Practical Histology in Vienna, and the Microscopical Study of Blood and Epithelium. By JAMES TYSON, M.D. (Reprinted from the *Philadelphia Medical Times.)* Philadelphia: J. B. Lippincott & Co. 1873. Pp. 34.

Dr. TYSON gave the results of a portion of his experience in Europe to his friends of the Philadelphia Academy of Natural Sciences, and kindly allows a wider circulation to his communication through this brochure. The style is very much that which might be found in a letter from a friend interested in and at work upon the subjects spoken of. The manner and means of isolating the elements of the various tissues are clearly and concisely given, the points to be investigated are indicated, and the questions to be asked are anticipated. The beginner is told what to do, not what he may do, the reverse of the directions found in so many of the usual text-books. It would be difficult to find elsewhere such a simple statement of what can be done by any and all who may possess even a slight active interest in the subject of histology.

BOOKS AND PAMPHLETS RECEIVED.

The Mineral Springs of the United States and Canada, with Analyses and Notes on the prominent Spas of Europe and a list of Sea-side Resorts. By Geo. E. Walton, M.D. New York: D. Appleton & Co. 1873. Pp. 390. (From A. Williams & Co.)

The American Chemist for May. Published by Henry A. Lea. (From A. Williams & Co.)

Seventeenth Annual Report of the Births, Marriages and Deaths in the City of Providence for the year 1872. Pp. 63.

Normal Ovariotomy. By Robert Battey, M.D. From the *Atlanta Medical and Surgical Journal*, 1873. Pp. 42.

Ninth Annual Report of the Overseers of the Poor of the City of Boston for the Financial Year 1872–73. Boston. 1873. Pp. 34.

Boston Medical and Surgical Journal.

Boston: Thursday, June 19, 1873.

THE SUCCESS OF THE HARVARD MEDICAL SCHOOL.

All friends of progress in medical education will be glad to read the following extract from President Eliot's speech at the annual dinner of the Massachusetts Medical Society :—

"Two years ago, in this place, the University asked the approbation and support of this old and vigorous Society in an attempt to reform medical education. The University has had your cordial support; the revolution is two-thirds accomplished ; and, instead of hopes and promising plans, I can now bring you thanks and the assurance of complete success in a much shorter time than the friends of the undertaking had dared to hope. The Harvard scheme of medical instruction has commended itself to the reason and the experience of the whole medical profession. There has been but one voice, and that has been of approbation and encouragement. A few professors in other medical colleges have indeed declared with unfeigned sorrow their belief that the Harvard school must fail to secure the pecuniary success which its educational policy deserves. Some have thought that it would have been wiser to wait for a large endowment before attempting to improve the prevailing system of medical training. Gentlemen, that supposed necessity for pecuniary success is just what has brought American medical schools to their present disgraceful and appalling condition. The Harvard Medical School does not propose to be judged by that standard. There is not a place of liberal or professional instruction in the world worth preserving, which would consent to have its work and worth estimated by its balance-sheet. If the American medical school is to be a commercial speculation first, and a place of liberal training afterwards, then the pecuniary argument is the fundamental one. Otherwise the profession may reasonably call upon the faculties of all medical schools, in the first place, to teach as well as they know how and upon that general plan which commends itself to their deliberate judgment, leaving to the second place all question of pecuniary profit or loss. It must be observed, also, that all question of the money success of the Harvard plan would be at once set at rest if other medical schools ceased to offer cheap and easy access to the medical profession. As to waiting for an endowment, the faculty of our medical school thought that the first step towards getting an endowment was to deserve one. As you might perhaps infer from what has been said that our experiment is not succeeding in a pecuniary sense, I beg to add that the corporation has been more than satisfied with the result so far, and expects within two years to find the income of the school larger than it has ever been, and this for the very simple reason that under the new system one student for the whole course is as good as two under the old. The strength of the school as a place of teaching depends, of course, upon the quality and number of its teachers. I need not tell you, gentlemen, that the school has never had a stronger faculty than now, whether as regards numbers or professional eminence; they are thoroughly devoted to their work, and enthusiastically united in the determination to carry to a successful issue the reform which they planned and dared to undertake."

The following letter, which we re-print from the *Philadelphia Medical Times* of May 31st, gives a number of the details which show how unfounded are fears of the result. It will not be long before all schools pretending to high standing will be forced, in self defence, to follow the suggestion in the last sentence of Dr. Ellis's letter.

HARVARD UNIVERSITY MEDICAL SCHOOL,
Boston, Massachusetts, May 14, 1873.

To the Editor of the Philadelphia Medical Times:

DEAR SIR,—My attention has been called to an editorial in the *Philadelphia Medical Times* of March 22, 1873, in which the following passages occur:—"The managers of the Medical Department of Harvard University are trying, *we should to like to believe with satisfactory prospects*, a system of teaching radically different from that of any other school, at least in this country. . . . . And yet there is one important element—the financial—which threatens to fatally affect the success of the Harvard School." Then Prof. Stillé is quoted as saying, "One institution, to its honor let it be spoken, has re-formed its whole plan of teaching upon the model which reason and experience agree in approving as the best. *Much as I desire in this instance to be a false prophet, I have little fear of meeting with the fate of one, when I declare with unfeigned sorrow my conviction that the Medical Department of Harvard University, which has so heroically undertaken so difficult a task without providing endowments for its professors' chairs, must of necessity fail to secure the success which its liberal policy deserves.*"

Both these writers warmly approve the new system of the Harvard Medical School, and both prophesy, while they lament, its failure. The last annual report of President Eliot furnished materials for a more hopeful view, which might have mitigated Professor Stillé's sorrow. On referring to Dr. Stillé's published address, a foot-note showed that the report mentioned had been consulted by him, but that the facts therein stated had been overlooked or misinterpreted.

A statement which had proved most encouraging to those immediately concerned, had actually been used to strengthen the gloomy foreboding excited by the action of the Harvard Medical School.

We are informed that "immediately on the adoption of the new system of instruction the number of medical students fell from 301 in 1870–71 to 203 in 1871–72. The Catalogue of the Medical Department from 1872 to 1873 gives the names of 170 students. Under the new system, therefore, the classes have thus far progressively diminished. The receipts have fallen off in the same proportion, and the professors have nearly twice as much work to do, with a remuneration only half as great as they formerly received.

"The result of this arrangement must necessarily be to compel men of real eminence to withdraw from professorships which are so meanly salaried, and to substitute for them young and immature teachers.

who will regard their position in the medical college as a passport to reputation and practice, and who are willing to purchase the result by a few years of unrecompensed labor. By this plan the traditions of university education are set at naught, its dignity compromised, and its authority impaired. If any profession requires in its teachers the weight of character which maturity of intellect and ripe experience give, it is certainly the medical; but a plan which virtually excludes such qualifications by refusing to compensate them is too much in opposition to human nature and experience to succeed."

Now, let us look at the facts upon which these statements are based. President Eliot says :—

"It having been granted on all hands that these changes were excellent and desirable in themselves, the only ground on which they could be opposed was that they were not feasible, in view of the fact that the entire endowment of the Medical School is only $40,000. The comparison, therefore, of the current receipts and expenses of the years 1870–71 under the old system with those of the year 1871–72 under the new system is of particular interest :—

1870–71.

RECEIPTS.

Total receipts from students - - - - - -	$27,717 67
Interest on funds (Hersey, Jackson, Shattuck) - -	2,779 00
	$30,496 67

PAYMENTS.

For instruction (salaries) - - - - - - -	$19,476 82
For janitor and general expenses - - - - -	10,039 31
	29,516 13

1871–72.

RECEIPTS.

Total receipts from students - - - - - -	$24,104 59
Interest from funds (Hersey, Jackson, Shattuck) -	3,404 62
	$27,509 21

PAYMENTS.

For instruction (salaries) - - - - - - -	$20,019 56
For janitor and general expenses - - - - -	8,877 44
	$28,897 00

"The number of students in 1870–71 was 301, while in 1871–72 it was only 203. Yet the receipts from students were only $3,600 less in 1871–72 than in 1870–71. Many of the students present in 1871–72 were under the old system, and a considerable portion of these were entitled to gratuitous instruction, under the former rule that students paid nothing for the third year of attendance. The fact is that 150 students present during the year under the new plan would give a considerably larger revenue to the school than 300 did under the old. The corporation *paid rather more* for salaries in 1871–72 than was used for that purpose in 1870–71; but the sum appropriated for salaries was differently distributed. Excluding all items from both sides of the account which were not items of current receipt or expenditure, the deficit for the year 1871–72 was $1,387.79.

"The corporation had expected a much larger diminution of receipts from students in the first year of the new system, and were more than satisfied with the actual money result."

Let us now compare the deductions of Prof. Stillé with the facts presented in this clear exposition of the condition of the school. The following distinct points are made by the Professor:

1. Under the new system the classes have thus far progressively diminished.
2. The receipts have fallen off in the same proportion.
3. The Professors have nearly twice as much work to do.
4. The remuneration is only one-half as great as that which they formerly received.
5. The necessary withdrawal of these underpaid Professors, and a great variety of consequent evils.

We will now consider these points seriatim.

In regard to the diminution of the number of students, we must admit the fact, but this has been much less than was anticipated. But this diminution has no bearing whatever upon the main question, which is whether the number of students who join the school under the new plan is increasing or diminishing. The following facts show a constant increase. The first students under the new plan were drawn from the ranks of those who entered under the old. These voluntarily subjected themselves in June, 1871, to the written examinations, as evidence of their appreciation of the change. At the opening of the school in the fall of 1871 a much larger number of new students presented themselves, and in September, 1872, there was still a very marked increase above the number of the preceding year. These statements relate to the first terms of the two years corresponding in time with the old courses of lectures. A still more satisfactory result is seen when we compare the attendance during the second terms, this being the real test of the willingness of students to accept an annual course, which is one of the distinguishing features of this school.

The number of students in the second term of 1872 was ninety-six, of whom twenty-one received gratuitous instruction, in accordance with an old custom to the benefits of which they were entitled. In the second term of 1873 the number rose to one hundred and thirteen, of whom only six were free, and these were sons or assistants of professors. The number not only exceeded that of the corresponding period of the preceding year, but was much larger than that of any class in the summer under the old plan, although then some students joined for a single month, and now all must take the entire term.

The *second* point was that the receipts had fallen off in the same proportion as the students. The latter, according to the figures, had diminished from 301 to 203, or 33 per cent. Mr. Eliot's figures show that the receipts had fallen off 15 per cent. This term *the receipts have exceeded those of the corresponding term of last year.*

The *third* assertion, that the Professors have nearly twice as much work to do, we are glad to say is true in some important departments, to which sufficient time had not been given by the old system. The quantity of teaching has been largely increased; but this increase has been effected mainly by adding to the number of teachers. The Professors whose work has been increased have gladly given the additional time.

The *fourth* statement, that the remuneration was only one-half as great as before, notwithstanding the increase of work, is certainly not derived from the report, as that document states explicitly that *more was paid for salaries than in the previous year.*

Some changes were made in the distribution of this sum, according to the amount of instruction given by the different teachers.

In regard to the *fifth* point, its prophetic character of course makes a final answer impossible at present. It can only be said that up to the present time no Professor has resigned who had not announced his intention to do so before any change was thought of, and every one acquainted with the present composition of the Faculty will admit that it was never stronger than now in professional reputation, and it was never so numerous, so united, or so well satisfied with its work.

The kind of gloomy though pitying prophecy in which Dr. Stillé and the writer in the *Philadelphia Medical Times* indulge is simply one of the natural obstacles which the new system has to overcome. The Harvard Medical School has overcome much more serious obstacles already in contriving and carrying out for two years this great reform in medical education, and has the best prospects of speedy success, in spite of the competition of all the principal schools in the country, which continue to offer medical degrees on the old easier conditions. If five or six of the other leading medical schools in this country would join the Harvard School in making the changes in the system of medical instruction which Dr. Stillé and all other intelligent physicians who honor their profession admit to be desirable, there would be no question in any one's mind about the success of the reform.

Yours truly, C. Ellis, M.D.,
Dean of the Medical Faculty of Harvard University.

The Leprosy of the Bible. By A. Dunbar Walker, M.D.—The leprosy of the Bible has always been a vexed question, and in the present day seems no nearer solution than before. That the "creatures" (for, really, persons without hands and feet, wanting the greater part of the nose, with voices reduced to little else than a croak, and whose existence is a burden to themselves and their friends, are little above creatures) who meet one at the gates of a Syrian town in the present day are the lepers of Scripture, is generally disallowed; for the disease is not contagious, commences quite differently, and produces a disease in no particular resembling that recorded in Leviticus. Elephantiasis Græcorum, also, as seen in the East, is hereditary, which is not recorded about the leprosy of old. Hebra, in a note to his article on scabies, in his comprehensive and learned work on skin-diseases, has suggested that scabies was the leprosy of the Israelites, adducing in its favor—1, the contagious character of the disease; 2, the cure employed in Naaman's case—washing in the Jordan, a river whose water contains sulphur. In analysis of the Jordan water, sulphur is found, but certainly not in sufficient quantity to remove scabies by "washing seven times." The amount of sulphur in solution varies according to the place from which the water is taken: if near the source, it is in small quantities; and there is no doubt that it was near the commencement of the river that Naaman washed, for it is this part that lies on the road to Damascus. The most convincing circumstance, to my mind, that scabies was not the disease, is its rarity in Syria in the present day. In a year's experience of all kinds of diseases in Syria, amongst which were many cases of skin-diseases, no case of scabies presented itself to my notice.

Mr. Balmanno Squire has put forth in the Journal the idea entertained by many, that psoriasis presents many of the features recorded in Scripture regarding leprosy, supporting his theory by its frequency amongst English Jews and Asiatics. Of the greater frequency of psoriasis amongst Orientals, and more especially amongst Syrians, my experience in Syria is quite confirmatory; for amongst the Arabs I saw many cases, and more in proportion to the number of inhabitants than in England. But at the same time, of northern and western nations, removed far from Asiatic influence or blood, Norway affords as many cases of psoriasis, in proportion to its inhabitants, as Syria; and we find in this country elephantiasis Græcorum cropping up. Psoriasis is also a non-infectious disease, which was a character that preëminently distinguished the ancient leprosy. My own comparison of the Scriptural disease, with diseases now known in Syria or any other country, has brought me to think that the leprosy of the Israelites has entirely disappeared; and that, when in existence, it depended on some fungus which attached itself to the hairs of man and animals, producing a crust similar to favus, only of a white color, for we find it producing its effects not only in men, but on the skins of animals worn as garments, and on the walls of the houses.—*British Med. Jour.*

Transmission of Cholera to Animals.—Dr. Leo Popoff has published (*Berliner Klin. Wochensch.*, Aug. 12, 1872) a series of experiments performed upon dogs with the idea of demonstrating the possibility of inoculating these animals by means of cholera-excrementa. He first carefully observed the effect of introducing putrid animal matter into the blood, and then demonstrated how these lesions differ from the characteristic symptoms of cholera in the dog. This difference is most striking in the *post-mortem* changes, consisting in hæmorrhagic inflammation of the stomach and intestines, and ulcerations of the lymphatic glandular apparatus of the intestine. Where the excrement employed was fresh, the disease produced corresponded perfectly to the symptoms of cholera. Where the material introduced had been allowed to stand several days, the symptoms produced were partly those of cholera, and partly those following the introduction of putrid matter.

The conclusions arrived at by Dr. Popoff are:—

1. That cholera may be produced in animals through inoculation by means of cholera-excrementa, the vomited matter, or even of the urine of patients suffering from this disease.
2. That when the excrementa have stood for some time, the symptoms produced are not altogether pathognomonic of cholera, but resemble, in part, the effect produced by the introduction of any putrid animal matter into the economy.
3. That the severity of the symptoms depends in a degree upon the freshness of the excrementa.
4. The infection may take place from the introduction of the *materies morbi* immediately into the blood, i. e. without coming in contact with the intestine.
5. The characteristic symptoms of cholera poisoning in animals are produced, not immediately after the introduction of the poison into the economy, but only after the lapse of a fixed interval, varying from one to three days.

Correspondence.

OYSTERS AND THEIR PECULIAR DIGESTIVE PROPERTY.

MESSRS. EDITORS,—Recently, you had a paper from me about pepsin. While trying experiments with it, I was one day requested by one of our most experienced physicians to digest two oysters. I placed them, after thorough washing, with one grain of Sheffer's pepsin, four drops hydrochloric acid, and one ounce of water, in a test tube, and submitted to a temperature of 100° Fah. At the expiration of two hours, almost perfect solution had taken place, only four and a half grains remaining on the filter, and the residue was of a feculent character.

Thinking over this result, and the matter of eating raw oysters, I came to the conclusion that here we have an organized being, with a stomach, &c., calculated to digest infusoria—as its food—and hence possessing a gastric juice; and if so, what should hinder that gastric juice from digesting even the oyster itself, if submitted to the proper condition.

With oysters, as bought by the quart, there is so much liquor. On boiling a little of this liquor it coagulated, indicating so much coagulable albumen. I took another portion, of two drachms of this liquor, one drop hydrochloric acid, and submitted to 100° Fah. for two hours. It remained perfectly clear, and, on boiling a half of it, there was no coagulation, and, applying Fehling's test, there was the beautiful purple color produced, the whole indicating that there was in the liquor a natural element to produce the result. This experiment I have tried repeatedly; and, to make the matter still more conclusive, I placed one ounce of the filtered liquor in a flask, added to it 120 grains of thoroughly washed and wiped, solid part of an oyster, and five drops hydrochloric acid, and submitted to 100° Fah. for seven hours. On filtering, I had only 17 grains of solid matter left, thus showing that 103 grains of the solid oyster had been digested in one ounce of the liquor.

These facts are, I think, extremely interesting, and though my medical brethren have with me, ordered patients, on recovering from exhausting disease, oysters as a part of the diet, and may have done it empirically, it has, after all, been done under strictly chemico-physiological principles, without our knowing it. Very truly yours,

Lowell, May, 1873. E. H. HOSKINS.

A CASE OF PRECOCIOUS MENSTRUATION.

MESSRS. EDITORS,—There is a little girl, in one of the families where I am called in my practice, now in her sixth year, who, last September, soon after completing her fifth year, complained to her mother of pelvic pain and the usual symptoms of approaching menstruation. She soon had a sanguineous show, which continued for three days and then ceased. The mother of the child called my attention to the fact. I could not account for it, and as the child was in apparent good health, no medication seemed called for. I thought then it was a hæmorrhage from some strain or injury that would not occur again, but it has continued regular once in twenty-eight days ever since. She is not precocious in any other respect, not large of her age; but the usual change in form suited to a young lady fifteen or sixteen years of age, has taken place, so that she looks like a little woman. I learn an aunt of this child became regularly menstrual at six years of age and continued till she was thirty-eight. I have never met with a case of the kind before, and I think such cases must be very rare. I should expect under such circumstances the menopause would commence correspondingly early.

Respectfully yours, R. K. CLARK, M.D.

South Hero, Vt., May 13, 1873.

Medical Miscellany.

DR. FARR reports that the proportion of children raised has doubled within a hundred years.

THE Medical Society of New Jersey held its one hundred and seventh annual meeting May 27th and 28th ult.

EXPERIMENTS in Vulpian's laboratory have shown that on melting putrid blood which had been kept frozen for several hours, the vibrios in it were as lively as ever.

INJECTION OF SPIRITS OF WINE INTO ADIPOSE TUMORS.—Dr. Hasse, of Wordhausen, recommends the injection of alcohol into the substance of adipose or lipomatous tumors. He gives one case of a female who had a large fatty tumor reaching from the shoulder to the armpit. He injected alcohol into this at four different sittings, with fifteen days' interval, directing the syringe into different parts of the tumour. In a few days there was some slight inflammation. The tumor became at first firmer, but soon softened and fluctuated at several points. In three weeks an incision was made into the tumour, and the fatty matter could be pressed out in a liquid form. In another case of a man, æt. 40, a similar treatment was adopted with similar result.—*The Medical Press and Circular.*

ALUMNI ASSOCIATION OF THE MASSACHUSETTS COLLEGE OF PHARMACY.—This society, which had its nucleus in the little class which graduated from the Massachusetts College of Pharmacy in 1869, held its annual meeting at the rooms of the College, No. 8 Boylston Street, on the 8th of May. There were present about twenty gentlemen. After disposing of reports from various committees, the following officers were elected for the ensuing year: President, Thos. Doliber; Vice Presidents, J. C. Loud, E. L. Patch; Secretary, C. E. Tappan; Treasurer, C. H. Bassett; Auditor, C. A. Tufts. Executive Board: G. F. H. Markoe, J. S. Talbot, E. S. Kelley and L. D. Drury.

The President gave an interesting account of the labors and progress of the past year, and made some valuable suggestions concerning their efforts in the future. After a congratulatory address by Prof. Babcock, an interesting discussion took place upon the late revision of the United States Pharmacopœia. The establishment of a journal of Pharmacy in Boston was considered, and a good deal of enthusiasm evinced on the subject. The Association has held meetings every month during the past year, which have been attended with great interest. A large number of valuable papers have been read, and elaborate reports of experiments and studies made; among the number an interesting paper on the adulteration of milk. Reports of experiments in the manufacture of hydro-bromate of quinia and mono-bromated camphor, detection of impurities in phosphate of iron have been made, while much valuable discussion has taken place.

The annual supper, at the American House, was attended by members and invited guests of the Association, and addresses were made by a number of the participants.—*American Journal of Pharmacy.*

HECTIC FEVER OF PHTHISIS.—The following prescription, known as Heim's pill, and recommended by Niemeyer, has been used with excellent results at Charity Hospital, New York:—

Pulv. digitalis, ℈ss.;
Pulv. ipecac.,
Pulv. opii, aa grs. v.
Ext. helenii, q. s. u. f. pil. no. xx.
Consp. pulv. rad. ind. flor. S. One pill three times daily.

The Use of Chloral as a Topical Application for Bed Sores.—M. Martineau has found that the sloughing of the integuments over bony parts can be treated, if not prevented, by the use of a solution of chloral, 1 in 100 parts of distilled water. He lays this on with a feather and lint, and in a few days the wound heals.—*The Dublin Medical Press and Circular.*

Dr. Smith has brought out a book in Calcutta, entitled "Fever and Cholera from a new point of view." He puts typhoid fever, yellow fever and cholera under the head of ague, and endeavors to show that the general impression concerning the cause of the Prince of Wales's late fever was all wrong, that it did not come from bad drainage but from malaria. The reviewer in the *British Medical Journal* is disgusted.

Death from Gonorrhœa.—A case of death from this cause has been recorded by Dr. Villneuve, of Marseilles Hospital. The patient was attacked by intense gonorrhœa, chordee and inflammation. Leeches were applied, and a slough formed, which, on separating, exposed the corpus cavernosum; rigors shortly set in, and pain in the joints of the upper extremities. The patient got an abscess in the elbow, and finally died from bleeding at the eschar wound on the penis. The history of the case indicated acute gonorrhœa, with penile and prostatic phlebitis and pyæmia.

Having seen intense gonorrhœa ending in "penitis," or inflammation of the entire organ, followed by the death of a fine young man, the question suggests itself whether amputation is not necessary and justifiable where no pyæmic symptoms are decidedly evident.—*Dublin Med. Press & Cir.*

NOTES AND QUERIES.

T. F. O., Titusville, Pa.—Our correspondent is referred to a communication by Dr. P. De Marmon, in the New York *Medical Record*, April 1st, 1873, page 164, wherein the properties and composition of sulpho-vinate of sodium are described. The salt is also described in the *Gazette Hebdomadaire*, June, 1870.—Eds.

Married,—In this city, 5th intst., Dr. W. E. Boardman to Miss Mary B. Bryant, both of Boston.

Mortality in Massachusetts.—*Deaths in seventeen Cities and Towns for the week ending June* 7, 1873.

Boston, 134—Charlestown, 9—Worcester, 11—Milford, 2—Chelsea, 4—Cambridge, 9—Salem, 9—Lawrence, 10—Springfield, 9—Lynn, 15—Fitchburg, 2—Taunton, 4—Newburyport, 6—Somerville, 7—Fall River, 18—Haverhill, 2—Holyoke, 10. Total, 261.

Prevalent Diseases.—Consumption, 40—pneumonia, 22—cerebro-spinal disease, 11—scarlet fever, 9.

Six deaths from smallpox occurred in Holyoke.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, June 14th, 136. Males, 73; females, 63. Abscess, 1—apoplexy, 3—disease of the bladder, 2—disease of the bowels, 2—bronchitis, 3—inflammation of the brain, 1—congestion of the brain, 1—disease of the brain, 6—cyanosis, 1—cancer, 4—cerebro-spinal meningitis, 6—cholera infantum, 1—cholera morbus, 1—consumption, 28—debility, 4—dropsy of the brain, 2—drowned, 1—dysentery, 1—eczema, 1—scarlet fever, 8—typhoid fever, 3—exhaustion, 1—disease of the hip, 1—disease of the heart, 9—homicide, 1—intemperance, 1—disease of the kidneys, 1—disease of the liver, 1—laryngitis, 1—inflammation of the lungs, 6—marasmus, 5—measles, 1—noma, 1—old age, 3—paralysis, 1—pleurisy, 4—premature birth, 3—peritonitis, 1—puerperal disease, 1—rheumatism, 1—scalded, 1—smallpox, 1—disease of the spine, 1—syphilis, 1—teething, 2—tabes mesenterica, 2—whooping cough, 1—unknown, 4.

Under 5 years of age, 42—between 5 and 20 years, 16—between 20 and 40 years, 32—between 40 and 60 years, 24—over 60 years, 22. Born in the United States, 88—Ireland, 30—other places, 18.

THE

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Original Communications.

BUNION.

By Charles H. Lothrop, M.D., Lyons, Iowa.

Read before the Clinton County (Iowa) Medical Society, April 15th, 1873, and before the Surgical Section of the American Medical Association, at St. Louis, Mo., May 7th, 1873.

I have chosen this subject at this time, partly because the treatment of this surgical disease is to a great extent ignored by the regular profession and left to the tender mercies of empirics, who have invented bunion plasters and bunion apparatus, not only to please their own fancies, but for the purpose of depleting the pockets of their patients.

The subject has, however, been chosen chiefly because I am desirous of bringing to your notice a new apparatus for assisting in the treatment of this affection, which, when used by the intelligent surgeon perseveringly, I am confident will prove a success.

While some writers have devoted much space to its pathology and treatment, others seem to have forgotten that poor human nature is ever afflicted with such a severely painful disease, and the subject is passed over in silence.

Holmes, in his work, devotes five pages to its pathology, and then remarks that it is only in the early stages of bunion that treatment will avail for the complete removal of the disease. He advises the use of iodine and the compound mercurial ointment.

Prof. Meyer, in an article upon this affection, recommends the wearing of shoes so constructed as to tend to restore the toes to their natural position, and thus leaves the subject.

Prof. Gross says that bunion is a corn on a large scale, and requires similar treatment. He recommends rest and elevation, leeching, blistering, &c. For the malposition of the toe, he suggests the apparatus of Mr. Bigg, which is represented and described in the second volume of his surgery.

Mr. Erichsen says change the direction of the toe by wearing properly shaped boots. He also recommends the division of the tendons; "then place the toe upon an under splint."

Mr. Wales, in his work, recommends a wide boot and Bigg's apparatus, as already mentioned.

Mr. Druitt says that proper shoes are necessary, while Mr. Key recommends that the great toe be kept in proper place by means of "a partition in the stocking like the finger of a glove, and a partition of strong cow's leather fixed in the sole of the shoe."

Miller says, briefly, that it is more easily prevented than cured. He recommends the wearing of wide boots and shoes, the application of nitrate of silver, iodine, &c. He also says that "in rheumatic or gouty adults, the toe riding over its fellow and outwards, it can be but palliated."

Prince, in his Plastics and Orthopædics, is very brief, advising only proper fitting boots and shoes.

Bauer, in his Orthopædic Surgery, Barwell, on Diseases of the Joints, Davis, in his Conservative Surgery, and Sargent, in his Minor Surgery, do not mention the subject at all. And he who turns to his library for the purpose of a consultation with the authors upon this affection, with the expectation of finding a reliable course of treatment, will be disappointed in the result of the interview.

In the explanation of my mode of treatment, and the apparatus used, it is not necessary to speak of the various pathological changes which have taken place before the bunion has come under the observation of the surgeon. It is sufficient to say that, in the natural formation, the inner line of the foot and great toe is nearly straight, while there is an interval of more or less extent between each of the toes. Now, in this affection, the toe has left the place of its nativity and is found sojourning in a foreign locality. The internal lateral ligament and abductor pollicis pedis muscle have become lengthened, while the external lateral ligament and adductor pollicis pedis muscle have become shortened. The flexors and extensors of the toe have also, to a great extent, become adductors, and the result of this abnormal condition is that, in either flexion or extension, there is an effort to a greater displacement and consequently to a greater distortion. Sometimes this takes place to such an extent that the toe may be seen completely overriding its fellow. At such times there is a very conspicuous displacement of the metatarsal bone inwards, while the proximal phalanx is pressed outward, producing an angle at the metatarso-phalangeal articulation, which separates to some extent the internal margin of the articular surface.

A wide boot or shoe in the treatment of bunion is unquestionably necessary, but that alone will not elongate that already shortened condition of ligament and muscle; something more is requisite.

The recommendation of Mr. Erichsen, the division of the tendon and the application of an under splint, is not practicable; besides, there is danger of inflammation, and, finally, of stiffening of the joint. The compulsory apparatus of Mr. Key, by means of a partition in the stocking, like the finger of a glove, and a partition fixed in the sole of the shoe, could not be worn for any length of time without producing pain, inflammation, excoriation, &c. The apparatus of Mr.

Bigg has, as I have been informed by a manufacturer of surgical instruments in Philadelphia, proved a failure, and the manufacture of it has been stopped. Displacement of the toe is the obstacle to overcome. This cannot be done by violence without great suffering and distress to the patient, but can be surely and safely accomplished by gentle means. It is necessary that a large boot, shoe or slipper, made of cloth or other light material, be worn during treatment. A cot, made of muslin or some soft firm fabric, is placed upon the great toe; one or more strips of adhesive plaster are placed upon and around the heel, the free extremities of which extend towards the free end of the cot upon the toe. The ends of the plaster and cot are then connected by means of a strong rubber ribbon, and the *persuasion* of the toe to return to its natural position commences.

It is sometimes necessary to use other strips of plaster to retain the apparatus in position, one about the instep and one about the ball of the foot, while another is sometimes bound about the great toe and attached to the second, in order to keep each in proper position.

The contractile power of the external ligament and adductor pollicis pedis muscle is overcome without injury. If they do not readily yield, then they may be partially divided by the operation of tenotomy without any dangerous consequences. The danger of inflammation of the joint, resulting from the violent replacing of the toe, is avoided. The antagonistic power of the internal lateral ligament and abductor pollicis pedis muscle is once more regained. The flexor and extensor muscles perform only their legitimate functions. The horrible distortion disappears, and your patient thanks you, with a grateful consciousness that you are, like Luke of old, "the beloved physician."

PANCREATINE, AND ITS USELESSNESS.

By E. H. Hoskin, M.D., Lowell.

The following experiments, their history and conclusions, may be interesting, and possibly useful to the profession.

I am much indebted to my friend, Mr. Edward J. Moore, of the City Hospital (Boston), for assistance in these experiments, as well as in others, that, during the last two months, have been undertaken in my office, and of which you already have had one or two accounts.

The fresh pancreas of a cat, killed during full digestion, was divided in two equal portions. One part was simply digested with water, the other was digested at a temperature of 100° Fahr., in one ounce of water with one grain of Sheffer's pepsin and four drops of hydrochloric acid. Ten grains of pancreatine in powder (Hawley's make), one grain Sheffer's pepsin, four drops hydrochloric acid and one ounce of water, at 100° Fahr. All these three were digested for seven hours, at the same temperature, with the following results. On adding equal portions of olive oil to the three samples, the simple infusion of the fresh pancreas made a perfect emulsion, which remains to this day (sixteen days thereafter). Neither of the other two produced this emulsion with the oil, thus showing, most conclusively, I think, that no good can be derived by the patient taking, when ordered, the expensive pancreatine, or any of its glyceroles, or other solutions; for in the stomach the pancreatine will be digested as would any other nitrogenous matter.

Dr. Dobell certainly recommends (in his work on tuberculosis) the giving of pancreatine, but he does not so urgently speak of it as of the pancreatised solid fat, and, in fact, I think his position in regard to that is somewhat equivocal.

I would urge, as corroborative of my views on this matter, that the gastric juice acts its part as a converter of food into peptone, solely in the stomach and first part of the duodenum. At soon as the bile comes in contact with the chyme, peptic digestion is at once totally arrested; then the pancreatic juice performs its functions in the digestion or emulsion of fat, and its other functions relative to other matters brought in contact with it.

Lehmann, in his Physiological Chemistry, and Dalton and other physiologists, call in question this act and property of bile, but Thudichum, in his Chemical Physiology (1872, page 21), says: "Bile precipitates pepsin, and when it regurgitates into the stomach, arrests digestion completely. It therefore puts an end to pepsine digestion in the duodenum, and favors the alkaline pancreas digestion."

I may also quote from Dr. Chambers's work on "The Digestions," page 106. "By this the fat is partially emulsified, and, according to the microscopic examination by Dr. Bernard, repeated by Dr. Dobell, emulsified into finer globules than by other re-agents. What, however, is of importance, is, that they do not re-unite, but the emulsion remains complete after exposure to the action of gastric juice and hydrochloric acid. It is, therefore, capable of passing through the stomach unchanged, and being supplied to the intestinal absorbents in a finely divided state."

I certainly was a little doubtful about the tenability of my position, but, on looking through Thudichum's work, was both relieved and, I may say, gratified to find that what I had previously advanced had the higher sanction of his investigation and authority.

It would appear, then, that the non-digestion of fats may depend on two conditions: when the liver does not secrete the proper quantity of bile, and at the proper time discharged; and when again the pancreas does not perform its proper functions. In both cases of disease, nutrition may be promoted by the use of pancreatine emulsion, as this form of fat will pass through the stomach, to be absorbed at the proper time and place; thus, the system being kept in a nearer approach to the normal state, will give even the affected organs increased chance to recuperate, and thus lead to restoration of the general health.

To sum up—the whole evidence would go to prove that the only proper way to make use of pancreatine, or any of its solutions, is in the form of an emulsion with fat or with some oil. The physician will be disappointed, and the patient injured in his pocket and health, as much by the use of pancreatine powder, &c., as by the use of inferior and inert pepsine.

I think it is the duty of the physician to look into the properties of the medicines he prescribes, and not be content with the assertions of those who make a business of making most *elegant* pharmaceutical preparations, but very often most *useless* therapeutic agents. The apothecary often has to take the blame for the inutility of his goods, but he has to dispense what is ordered by the physician, who frequently (especially in this present generation) knows nothing, or comparatively nothing, of how to determine the value of the compound he prescribes.

VIBRATORY OR OSCILLATORY MUSCULAR MOVEMENTS AND THEIR SIGNIFICANCE. BY C. E. BROWN-SEQUARD, M.D.—Most writers on wasting palsy give, as a diagnostic sign of that affection, the existence of undulations in bundles of muscles preceding their atrophy. They consider that such a symptom is always a sure indication that the attacked muscles are soon to waste away or are already wasting. I have seen three cases in which this peculiar vibration, occupying alternately the various bundles of some muscles (in one case nearly all the striped muscles), had existed too long for our accepting that the trouble has such a diagnostic meaning. In one case it had existed in one arm and the chest, on the same side, for several years. In a second case, in a young gentleman attacked with epilepsy, it had existed five years. When I expressed some fears to his father, an intelligent member of Parliament, the reply was that the trouble could not have the significance I attached to it. This father of my patient was a very strongly built man, nearly 53 years old at the time I saw him; his muscles were very large, hard, and strong, and his general health was excellent. He assured me that every muscle in his limbs and trunk occasionally was seized with the peculiar fibrillary vibrations usually belonging to wasting palsy, and that it had been so all his life since some time before he had reached puberty, i. e., more than thirty years. Not a day passed without his finding a great many muscles, or rather most of the muscles, being attacked. Hardly ever was he an hour without some vibration of many muscular bundles. I examined his arms and legs, and found that the movements, then and there occurring, were exactly similar to those we see in genuine cases of Cruveilhier's atrophy or wasting palsy. This symptom, therefore, has not the decisive value that it is admitted to possess in the diagnosis of impending wasting palsy.—*Archives of Scientific and Practical Medicine.*

Progress in Medicine.

REPORT ON SURGERY.

By J. Collins Warren, M.D., Boston.

[Concluded from p. 626.]

Transfusion of the Blood. By H. Leisrink (*Sammlung Klinischer Vorträge*, No. 41).—The object of this lecture is to help the cause of transfusion, which at present is exciting more and more attention in Europe, and is already becoming a subject of much interest in this country. After a slight historical sketch of the mode of treatment, the lecture is devoted to the consideration of the following questions:

I. What are the indications for transfusion?

II. Shall we employ defibrinated or non-defibrinated blood?

III. How is the operation performed in the best and simplest manner?

The most important indication is naturally acute anæmia, and the most frequent example of this we find in midwifery. We should be guided here chiefly by the contractions of the uterus. Provided they are energetic, we may delay the operation; but should the uterus be unable to contract, transfusion is the most powerful stimulus for the purpose we have at our command. In great loss of blood after injuries or operations, however, the surgeon should never wait. It appears that certain German surgeons employ transfusion much more freely than is generally supposed. For instance, Esmarch, during the removal of a vascular tumor at the base of the cranium, replaced the lost blood by transfusion in the arm; and during an amputation at the hip-joint, the blood was saved and injected into the body again through the femoral vein.

According to Leisrink, transfusion should be employed in chronic anæmia also. He recommends it in convalescence from typhoid fever, or from any long febrile disease which leaves the body so exhausted that any slight intercurrent disease might prove fatal. Forms of dyspepsia occur where the blood does not offer the proper materials for the digestive process. In these cases frequent transfusions are indicated, to enable the heart to accustom itself to the change.

Among the qualitative changes of the blood, we find transfusion of importance in pyæmia and septicæmia. This has, however, as yet not proved very successful, although a temporary improvement is often seen. The transfusion should be frequently repeated. Of course, this treatment is useless provided the source of the blood poisoning still remains. Transfusion might also be employed in the various forms of gas poisoning, and in such cases as much as is possible of the unhealthy blood should be removed at the same time. Opium, atropine, and chloroform poisoning are also mentioned, and also chlorosis and leucocythæmia.

The author urges strongly the use of defibrinated blood, in order to avoid the danger of thrombosis and embolism. Moreover, the beating up of the blood has a particular advantage in enabling the blood corpuscles to take up plenty of oxygen. The blood should be defibrinated by stirring with a wooden stick and straining through a handkerchief; should a second stirring produce more fibrine, the straining should be repeated. The blood should remain in a vessel surrounded by hot water, about 38° Centimeter; a difference of a few degrees is not important.

In regard to the method to be employed, the writer says that any form of syringe will do in urgent cases. He prefers the syringe invented by Eulenberg or the one by Uterhart, in both of which there is an arrangement in the nozzle for the prevention of the passage of the air. A forceps, bistoury, a couple of threads and a needle are the only other instruments necessary. In regard to the quantity of blood to be injected, the indications must decide. From half an ounce to twelve ounces have been used. The veins at the bend of the arm are the most suitable for this operation. Slight symptoms of distress and changes of the pulse are common with patients during the operation, and should not disturb the surgeon. The patient needs encouragement, for the moral effects of the operation are generally very decided. The author recommends strongly the veins as more suitable than the arteries for transfusion. Apart from the greater severity of the operation, from which many a physician might shrink, it is sometimes not possible to force the blood into the arteries on account of the arterial pressure, an event which happened lately to a distinguished Hamburg surgeon, who was obliged to resort, finally, to venous transfusion.

Dr. Ferdinand Petersen, first assistant at the clinic of Prof. Esmarch, at Kiel, reports several cases of transfusion, combined with or following surgical operations *(Berliner Klinische Wochenschrift,* December 23, 1872).

The first case was a young girl, 12 years of age, whose leg was amputated for caries of the tarsus; a week after the operation, hæmorrhage occurred from the stump, and was followed a few days later by a second one, so that it was found necessary to tie the femoral. The patient's condition was such after the latter operation that transfusion was determined upon the following day. After a certain amount of blood had been taken from two female nurses and defibrinated, the patient was chloroformed, and the brachial artery of the right arm was exposed. The patient was then allowed to come to, and, the artery being prepared according to Hüter's method, the blood was injected. The flow of blood was easy, and the canula was plugged but once; 250 ccm. were injected. During the injection, some purplish spots were seen on the forearm, and these gradually became larger and finally ran together. At the same time, the arm became somewhat swollen. The effect on the patient was very striking. A general feeling of warmth spread from the arm over the whole body, and she began immediately to feel hungry. Her face became quite rosy, and the eyes brighter. The pulse became stronger, and from 160 went down to 136. The spots on the arm disappeared rapidly, and only a slight swelling remained.

The same evening the patient was somewhat feverish, but on the following day her condition, mentally and physically, was greatly improved; no bad symptoms appeared subsequently, and complete recovery eventually took place.

The second case was a vascular, pulsating, fibrous, retro-maxillary tumor of two years' standing. The patient was a young man, 19 years of age. On entering the hospital, the left side of the face was much increased in size, the eye protruded, and the cheek and temple distended by a pulsating mass, which occupied, also, the left nasal cavity. Ergotin injections were first tried, but without success, and repeated and severe hæmorrhages followed at intervals of a few days. The patient became very anæmic, and as it was evident he was in extreme danger of bleeding to death, Prof. Esmarch decided to remove the tumor, after performing the osteoplastic resection of the upper jaw. Tracheotomy was first performed, and the pharynx plugged, to prevent asphyxia from bleeding into the trachea; the brachial artery was, at the same time, laid bare and prepared for transfusion, blood having previously been taken from three healthy individuals and properly prepared. The tumor was found to be in a gangrenous condition, and was removed with great difficulty, and the loss of blood was very great. During the operation, transfusion was performed by Dr. Petersen, and continued until the operation had been completed. About 600 cm. of blood were injected, but notwithstanding all these precautions the patient scarcely survived the operation, and died upon the table.

The Use of the Sharp Spoon in the Treatment of Ulcers. By Dr. Max Schede *(Allgemeine Medicinische Central-Zeitung).*—The use of the gouge and like instruments for removing portions of bone no longer capable of undergoing the process of repair has been applied lately to diseases of the soft parts. The shape of the spoon has, however, been substituted for that of the former instrument. In this form it has been recommended by Volkmann for lupus, and Simon has used it for the removal of soft growths from the orifices of mucous membranes. In the clinic at Halle, a great variety of ulcerative processes are treated in this way. The large material has given abundant opportunity to test this method thoroughly, and the results have been so satisfactory that all forms of chronic ulcerations are treated by this method. The brochure, bearing the title given above, enumerates the indications for the use of this instrument. The diseases in which it is employed are the following:—

1. Ulcerations of the skin and subcutaneous cellular tissue in scrofulous cases, with unhealthy granulations and ill-defined edges. These granulations are easily cut through at their base by the sharp spoon and removed, the surface thus exposed soon covering itself with healthy granulations. We may find similar conditions in fistula in ano.

2. Suppuration of lymphatic glands. It is necessary to scoop out the diseased gland tissue several times in order to remove the whole disease.

3. Peri-articular fistulæ.

4. Caries of the joint, in which the scooping-out process is often a good substitute for every other operation, or prepares the joint for resection, which would otherwise have been impossible.

5. Caries, ostitis and osteo-myelitis. Obstinate forms of œzena are treated in this way.

6. Neoplasms, particularly cancer of the orifices and cavities of the body, in cases when a complete removal is no longer possible. Cancer of the uterus and vagina, and of the rectum and posterior wall of the pharynx. Also, myeloid tumors of the jaw have been treated successfully with the spoon. Sarcomata, however, are not so suitable for this form of treatment as carcinomata.

Resection of the Knee-joint for Gun-shot Wounds. Lotzbeck *(Aerztl. Intell.-Blatt.,* Nos. 31 and 32) *(Centralblatt,* No. 38).—The author has collected all cases to be found in the literature of the subject.

Before the Franco-German war,	50 with	35 deaths	= 70·0 per cent. mortality.
In " " " "	16 "	13 "	= 81·3 " " "
Total,	66	48	72·8 " " "

Statistics of thigh amputations show a mortality of 74·3 per cent. If from this the amputations of the lower third of the thigh are selected, being the only ones to be taken into account in connection with resections of the knee-joint, we find a mortality of only 60 per cent., being a decided difference in favor of amputations. Moreover, the usefulness of limbs after resections are not satisfactory. Amputations of the thigh are much to be preferred to resections of the knee-joint in the field.

Ligature of the Femoral in a Case of Elephantiasis of the Right Leg. Queirel *(Marseille Médical,* May 20, 1872; *Centralblatt,* No. 52). The above communication is of interest, as a contrast to numerous reports of cure of elephantiasis by ligature of the main arteries. Queirel tied the femoral in a case of well-developed elephantiasis, with complete success. The patient was discharged cured, but at the end of a year the disease had completely returned.

I confess to being a heretic in matters of diet. Do what I will I cannot bring myself to accept the current belief that butcher's-meat is food *par excellence,* and that all other food is little more than "padding." On the contrary, I feel convinced that views and practices in this respect have changed infinitely for the worse during the last few years, and that herein, perhaps, may be found one main reason why various nervous disorders are so numerous and often so difficult to deal with.

Few persons, with any practical experience, I think, will maintain that the diet of "training," which is relatively rich in lean meat and poor in the other constituents of diet, especially in the oleaginous, can be kept up for any length of time with absolute impunity. The fact, indeed, is simply this, that an extraordinary degree of muscular strength is got up, not by the diet simply, but by the whole plan of training, in six weeks or thereabouts, and that, afterwards, the man in training gets out of "condition" every day, perceptibly losing muscular energy and firmness and pluck, and becoming headachy, feverish, and out of sorts in every way.

Few persons, also, will nowadays be prepared to contend uncompromisingly for Bantingism, which is practically the diet of training carried still farther to extremes on the side of meat; and not a few, I take it, will have begun to suspect that there may even be something actually hurtful in the practice. For myself, I will simply say that I have quite come to a conclusion on the subject, and that I very much doubt whether there ever was a fallacy which, to use a common phrase, has more effectually "played into the hands" of medical men—of those especially who are sought after by persons suffering from disorders of the nervous system.—Dr. Radcliffe, in *Croonian Lecture.*

Reports of Medical Societies.

LYNN MEDICAL SOCIETY. C. A. LOVEJOY, M.D., SECRETARY.

Railroad Injury; *Amputation.*—Dr. Pinkham reported the case. A man, aged 30, was run over by the cars, Dec. 24th, 1872, his left leg and the toes of the right foot being thoroughly crushed. Amputation was performed four hours after the accident, the left leg being amputated at about the middle, and the right foot disarticulated at the tarso-metatarsal articulation.

The patient slowly rallied from the severe shock, and, suppuration commencing, he was delirious for several days, but after this he made good progress, the recovery being only retarded by a small exfoliation from the end of the tibia.

Case of Labor.—Dr. Goodell reported the case. A practitioner, not a member of the Massachusetts Medical Society, attended a woman in labor, delivered a living child, gave several doses of ergot, and, after waiting some time, went away without delivering the placenta. Twelve hours afterwards, when Dr. Goodell was called, the placenta was still retained, and a second child could be plainly felt through the abdominal parietes. Ether was given, and a dead child delivered. There was an hour-glass contraction of the uterus, above the constriction of which the second child had remained. There were two placentæ. The woman partially rallied, but, finally, died from exhaustion on the fifteenth day.

Shoulder Presentation.—Dr. Cahill reported that being called to a labor, which had been attended by a midwife for eighteen hours, he found the right elbow presenting, and the uterus firmly contracted, the waters having been discharged twelve hours before. Ether was given, and a foot brought down, but further traction could accomplish nothing. The ether being allowed to pass off, the pains came on, and delivery was accomplished. Recovery favorable.

Injury to Hip.—Dr. Emerson reported that, in November last, a large, muscular young man was thrown from his wagon, striking on his hip. He walked several miles after the injury, but on sitting down he could not rise without assistance; he walked and rode, however, some distance further. Reaching home, he suffered considerable pain in the hip, and it was with difficulty that he could drag himself around. This crippled condition continuing, he called in medical aid, and, when first seen, four weeks after the injury, there was neither shortening nor eversion, but the patient could not flex the thigh, and there was great tenderness about the hip-joint, on movement, or pressure. At the end of five months, his condition had not changed; but during the last month the limb has apparently lengthened three-fourths of an inch. The pain is greater on movement of the joint, and a slight grating is perceived. The joint is probably extensively disorganized. Treatment has been rest and counter-irritation.

Peritonitis from Abscess of Liver.—Dr. Webster reported the case of a man, aged 26, who was taken suddenly ill on the eve of Feb. 24th. While in the army, during the late war, he had chronic diarrhœa, and he has since been subject to attacks of bilious colic. The last attack was two years ago. For two or three weeks preceding his illness, he suffered from occasional sharp pains in the hepatic region, the pains lasting for a few moments only.

The present attack began with a severe abdominal pain, which was relieved by a hypodermic injection. The pain returned again and again, requiring larger amounts of morphine, and was at last constantly present as soon as the effect of the opiate began to diminish. Vomiting and jaundice became prominent. The usual symptoms of peritonitis supervened, and the patient died on the tenth day.

Autopsy twelve hours after death. On cutting through the abdominal parietes, purulent fluid gushed out, and a quart was removed from the right half of the abdominal cavity. There was intense inflammation of the parietal and visceral peritoneum. Large intestine almost sphacelated and containing gas only. On the under surface of the right lobe of the liver, was a large ragged cavity, from which pus was still exuding. Rest of liver and the other organs were healthy.

Dr. Galloupe reported that a gentleman who had used wine temperately for years, was suffering from simple wakefulness. In treatment for this, chloral was given with excellent results, and wine was, for a time, omitted; but one day the patient drank a small quantity of champagne, and immediately he was attacked with a severe dyspnœa which lasted for an hour. A week or two afterwards he drank a glass of wine, and, again, he suffered from this dyspnœa, becoming almost asphyxiated. Soon after, having fully recovered from the sleeplessness, he omitted the chloral and resumed his wine. Occasionally, since, when restless at night, he has taken chloral, and invariably, if he drank wine in the next two days, he has suffered from an attack of severe dyspnœa, and at no other time has he had a like attack. During the last eight months this has happened eight or ten times.

Cerebro-Spinal Meningitis.—Dr. Newhall reported that he was called to a child seven years old, who was taken suddenly ill. When first seen, within twelve hours of the commencement of her sickness, she was almost moribund; she was vomiting, delirious, with face livid and pinched, extremities cold, the body bathed in a cold perspiration and covered with petechiæ the size of a pea. Pulse rapid and feeble.

Treatment.—Large sinapisms on neck and over the stomach, hot applications to the feet.

℞. Ammoniæ carb., gr. v.;
Spts. frumenti, ℥ ij., every hour.

In a few hours the quantity was lessened, and in twelve hours the stimulants were omitted. On the next day, the child was better, the petechiæ had disappeared, but the right arm was found to be useless and swollen, most at the elbow. Tonics and milk ordered. The improvement after this was rapid; in a week the arm had recovered and the child was playing around, sallow and emaciated, but otherwise apparently well.

Dr. Pinkham reported that seven weeks ago he was called to a child who had been suddenly taken with intense headache, with vomiting, deafness, fever and tonic spasms (opisthotonos). Treatment.—Potassii bromidum, leeches to temples, blisters over mastoids.

℞. Ammoniæ carb., gr. v.;
Spts. frumenti, m xx., every hour.

Afterwards

℞. Chloral., gr. iij.;
Ext. ergotæ fl. m. v.

In a few days the delirium and fever disappeared, and the child is still living, but terribly emaciated, taking only the smallest quantity of nourishment; he is completely deaf, and barely conscious.

Dr. Webster reported that he was called, April 7th, to a man who lived alone, and who had been seen out of his house the day before. When found, the man was unconscious, moaning, with neck perfectly rigid, but not retracted, feeble pulse and dilated pupils. The body was covered with livid spots, and the patient had had copious dejections. He gradually sank, and died forty-eight hours after he was first seen.

Dr. Galloupe reported autopsies of forty cases, made by him in the army. The disease was fatal in from twelve hours to eight weeks; it was confined to new troops, always attacked healthy men, and there was a great uniformity in the post-mortem appearances, the extent of the disease bearing the closest relation to its duration. In the most rapid cases, recent lymph was found under the arachnoid. Where the disease continued longer, the arachnoid was opaque, then the lymph was found creeping down into the spine, and increased in quantity. In the oldest cases, the lymph was disorganized, but there was never any pus. In none of the examinations was there found any congestion of the substance of the brain or cord.

Bibliographical Notices.

Archives of Ophthalmology and Otology. Vol. III., No. I. New York: William Wood & Co.

The volume before us contains twenty-three articles, of which sixteen are ophthalmological, and form nearly one-half of the contents. The first, by Chisolm and Knapp, describes an intra-ocular enchondroma of twenty-two years' growth, and forms an interesting and important contribution to the literature of intra-ocular tumors, inasmuch as it is the first tumor of the kind which has been recorded. Knapp, who made the histological examination of the tumor, traces the developement of the cartilage from connective tissue, and this agrees with the views of Virchow, as to the method of developement of enchondromata of soft parts. That the tumor was really intra-ocular seems sufficiently demonstrated by its history, and the fact that it was enclosed in a firm fibrous capsule resembling the tissue of the sclera, to which the extra-ocular muscles were attached.

Dr. H. Derby contributes a report of sixty-four cases of cataract operated on by Graefe's method by the staff of the Massachusetts Eye and Ear Infirmary during 1872. This is a step in the right direction, and one we should be glad to see followed by other institutions. Then, perhaps, some solution of the at present apparently hopeless discussion as to the respective merits of different methods of operation might be reached. To make such tables of value for the decision of this question, however, cases of traumatic and of senile cataract should be carefully separated, and there should not be so large a proportion of cases (15.6 per cent.) in which the results were unrecorded.

Nieden writes on the treatment of ulcus corneæ serpens, and gives a table of fifty cases of ulceration of the cornea, thirty-six of which came under this title, in which Saemisch's operation of slitting the cornea was performed. The results appear to have been very favorable.

Driver writes on the treatment of eye diseases by the constant current, but does not seem to us to have made out a very good case in its favor. Knapp, "Epicanthus and its treatment," is in favor of Von Ammon's operation, the removal of a rhomboidal piece of skin from the roof of the nose, for its removal, and he describes a case in which he performed the operation with good result. Until further experience may have convinced us to the contrary, however, we must range ourselves with the majority of oculists and believe that operative interference in these cases is unnecessary. An improved lid forceps described and figured by the same author, a modification of Snellen's, contrived so as to give greater space for operations on the lids, would appear to offer important advantages in some cases.

The remaining articles comprise cases of embolism of branches of the central artery of the retina, of persistence of the hyaloid artery, of spongy or gelatinous exudation in the anterior chamber in syphilitic iritis, of epithelioma, glaucoma, corectopia, and an interesting case of exophthalmos of one eye appearing during inclination of the body forward and disappearing in the erect position. O. F. W.

Of the twenty-three articles composing the volume, seven are on otological subjects, and fill considerably more than one half of the book. The first of these is a statistical report, by Dr. C. J. Blake, of 1,652 cases of diseases of the ear treated at the Eye and Ear Infirmary of Boston. The statistics are followed by general remarks on the treatment adopted in the various diseases and the percentage of each disease found in the different classes of patients. Especially to be noted is the treatment of myringitis by free scarification of the membrana tympani, attended by good and immediate results; of old cases of chronic catarrhal otitis, with contracted Eustachian tube, by myringotomy, repeated several times, together with catheterization. In these latter, the improvement is attributed to the diminished resistance to the passage of air after the perforation, and to the irritation causing a resorption of the thickening; but another and more reasonable explanation seems to be that the numerous incisions in different parts of the membrane restore more nearly the normal tension of the membrane, and thus improve its conducting power. Two cases of otitis intermittens in subjects with malarial fever are mentioned; both yielding to quinine and not to local treatment. The experiments on the perception of high musical notes have been already mentioned in this Journal. The article closes with the histories of two cases very markedly benefited by the use of the constant galvanic current.

The second article, by Dr. Moos, called Minor Communications, gives the history of a bean which, by ill-advised attempts at removal, was driven through the membrana tympani, and lay concealed for some weeks, but finally come out; the membrane healed and the patient recovered a useful, but much injured ear; a case of alarming hæmorrhage following the removal of a small polypus from the short process of the incus; a case of exuberant development of aspergillus, without any symptoms of irritation.

The third article, by Dr. Moos, on the significance of the higher musical tones, gives the histories of several cases which he examined specially with reference to this perception of such tones, and he concludes that, "in many cases of so-called deafness, the question as to whether the patient perceives the higher musical tones distinctly, faintly or not at all, may furnish us with a clue as to the probable degree of recovery of hearing."

Boettcher's article on a case of fibro-sarcoma of the auditory nerve has been already noticed in this JOURNAL.

Dr. Buck follows, with by far the best and most exhaustive article on the disease of the mastoid process which has ever appeared. The anatomy and developement of the part are first described, with wood cuts; then the diseases to which the part is liable are described, and illustrative cases given. These diseases he enumerates as inflammation of the external periosteum, simple congestion of the mucous membrane, congestion and filling up of the cells with a reddish pulpy material, chronic subacute inflammation, with sclerosis or hyperostosis and cavities; the diagnosis and treatment of the various forms are then given, and the whole is followed by a tabular report of thirty-five cases in which the bone was operated on.

A description of a method of recording the acuteness of hearing, which is an elaboration of that already described by Dr. Prout, in this JOURNAL, and a modification of the operation for cleft lobule, consisting of an adaptation of the Mirault-Langenbeck operation for hare-lip to the ear, closes the list of otological subjects. Both of the latter articles are by Dr. Knapp. J. O. G.

Mind and Matter. By SIR BENJAMIN BRODIE, Bart., D.C.L. With additional Notes by an American Editor. New York: Wm. Wood & Co. Pp. 280. 12mo.

THIS book, as its second title indicates, consists of "psychological inquiries, in a series of essays, intended to illustrate the natural relations of the physical organization and the mental faculties." In paper, typography and binding it is unexceptional. The name of the American Editor does not appear.

The first peculiarity which strikes the reader is its division into dialogues instead of chapters, in which Crites, Ergates and Eubulus discourse at length, with a slight shifting of scenery, from time to time, upon themes of the highest import. This method is really no novelty, since it has been in occasional use from Plato to Isaak Walton, and later. It is intended to lend a conversational charm and a smack of personality to abstruse discussion, and is especially suitable for a subject like the one in hand, upon which so little can be said authoritatively, and where inquiry and suggestion must take precedence of didactic instruction. It is pleasant to notice, however, how well Sir Benjamin agrees with himself, as represented by his three interlocutors! The arguments lack the vigor of opposing convictions, and the discussion is very amicable, as might well be expected.

Dialogue First is rather introductory and discursive, treating chiefly of the limits of mental exertion. Fatigue follows only upon volition, which implies attention, a purely mental act. Unconscious cerebration is unaccompanied by fatigue. Two explanations are given of this mode of cerebral action, neither of which seem quite satisfactory to the author. He asks:—"Is it that the subject every now and then comes before us, and is considered without our recollecting it afterwards? or is it that, in the first instance, we are perplexed by the multiplicity of facts presented to us, and that, after an interval of time, those of less importance fade away, while the memory retains those which are essential?"

We venture to suggest that both explanations have a bearing on the phenomenon in question, but that neither explains pure unconscious cerebration. May this not be a secondarily automatic action of the mind occurring in the region of ideas instead of motions? We find ourselves guided across the city with scarcely a single act of conscious direction. (The somnambulist is conscious of none.) We set out with a given objective point in view, and arrive without voluntary effort. So with a problem to solve, or some purely mental objective point to gain, having all the elements of a solution in mind, and the necessary mental training, we make unconscious progress during sleep, perhaps, and arrive at the desired result, all the more surely, on account of the absence of voluntary interruption. Sir Benjamin, however, thinks the faculty of correct reasoning a natural rather than an acquired talent. And it *may* be true, that a child or a peasant reasons more accurately on subjects within his range, for the very reason that the process is more automatic than voluntary.

In Dialogue Second, reasons are given for regarding the mental principle as distinct from organization. And it may be observed here, that to this opinion scientific thought seems at present tending. The correlation of the mental with physical forces, was probably too hastily assumed by some as the sequence of the brilliant discoveries of Grove, Helmholz, Tyndall and other physicists. Crites remarks that the properties of mind and matter are so different, as not to admit of the most distant comparison, and he turns on himself the argument of the materialist, who asks, what we know of mind except as dependent on material organization, by asserting that the existence of his own mind is the only thing of which he has any positive actual knowledge. Ergates also agrees with Eubulus and Crites, that we must admit "the existence of the Deity as a fact as well established as that of the law of gravitation." The human mind, however, can only be studied in its relations to the nervous system. The brain is shown to be a congeries of organs or instruments of the mind. These are receptive and reactive, but the nature of the cerebral changes seems to be beyond our knowledge.

Memory is discussed in Dialogue Third. Through the senses, impressions are made presumably on the convolutions of the cerebrum, but, to render these permanent, a mental act of attention is necessary. The most of what we experience fades, especially the impressions of infancy and old age, when the brain is unfitted to retain them. The sequence and association of ideas depend on relations too complex to be easily traced. In sleep and insanity, voluntary direction being absent, obscure or chance relations become manifest. Physical states acting through the nerves, or conditions of the blood acting directly on the sensorium, call up illusions and hallucinations of the senses, on the one hand, unusual and morbid trains of thought, constituting delusions, on the other. Narcotics and other poisons do the same, or, acting more powerfully, stop all cerebration. Insanity may be seen in loss of power to change the attention from a fixed idea or train of thought which thereby becomes morbid, overpowering the judgment, or balance of ideas. On the other hand, there may be loss of power to stop a too rapid flow of ideas, by fixing the attention on any one of them. These conditions, essentially the same, lie at the foundation of opposite forms of insanity.

In regard to moral insanity, the scientific trio are naturally in harmony. According to it, Sir Benjamin thinks there is great danger of confounding mischievous propensities with actual insanity. He confesses to a want of special experience, and evidently discusses the question altogether from the *society* stand point. He, however, admits that, since the line is so obscure, some provision for modified punishments, adapted to cases of modified responsibility, should be adopted; and this, after all, is about the position of most alienists. It would, however, take a great many Sir Benjamins to disturb the belief of one who had observed a single case of well-marked moral insanity.

The remaining dialogues are discussions on the different functions of the brain and cord; on mental faculties in animals and instinct in man, and transmission of acquired instincts; the last being a late and rather unnecessary refutation of the fallacies of the so-called science of phrenology, which has the air of a document resurrected from some portfolio to fill out the book. The book, as a whole, however, will repay perusal. T. W. F.

Conium in the Treatment of Insanity. By DANIEL H. KITCHEN, M.D., Assistant Physician of the New York State Lunatic Asylum. Pp. 24.

THE pamphlet is a re-publication of a paper of the same title which appeared in the *American Journal of Insanity* for April, 1873.

This paper sets forth a series of investigations made by the author, aided by the sphygmograph and thermometer, into the action of conium in insanity, at the Asylum. Many cases, with tracings of the pulse and records of temperature, are given, and the conclusions arrived at are favorable to its use. Its effect was seen mainly in muscular relaxation, reduction of pulse and temperature, and diminution of maniacal excitement. The author thinks the brain is affected only indirectly by conium.

DEATH FROM AN ATTEMPT AT CRIMINAL ABORTION.—Dr. T. Gaillard Thomas reports, in the *American Journal of the Medical Sciences*, a singular case of death following an attempt at abortion. A woman, æt. 32 years, wife of a physician, thought herself to be pregnant, and in order to obviate the discomfort of child-bearing, introduced into her vagina a *steel wire* seventeen and a half inches in length. The wire was thrust upwards its whole length, and then slipping from her hand disappeared entirely. Death ensued in sixteen days. At the autopsy, it transpired that the wire had penetrated the vaginal wall at the left of the uterus, and had then passed below the intestines, over the large vessels on the spine, across the abdomen to the liver. Striking the right lobe of this organ, it had glanced backwards to the diaphragm; had penetrated this, and, plunging into the lung, entered its tissue for the distance of two inches. The right lung was found to be in the third stage of pneumonia, and an abscess had formed in its lower portion where the wire had penetrated.

Dr. Thomas gives a satisfactory explanation why gastrotomy was not resorted to.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, JUNE 26, 1873.

A PROCLAMATION FROM THE STATE BOARD OF HEALTH.

To the Health Authorities of Cities and Towns of Massachusetts:—At a meeting of the State Board of Health, held on the 11th instant, the undersigned were authorized to issue a circular concerning Asiatic cholera whenever circumstances should seem to require it. Information has been received from trustworthy sources that a disease presenting all the usual signs of cholera is now prevailing at several points in the Mississippi Valley. We may, therefore, not unreasonably expect it to appear in Massachusetts during the present summer. Experience has proved that Asiatic cholera is fostered by filth and repelled by cleanliness. All measures which secure to a community purity of air and of water, tend not only to prevent the appearance of this scourge, but to diminish the mortality from other diseases which are always present during the summer and autumn. We would, therefore, advise the health authorities throughout the State to prepare without delay, to meet this unusual danger by removing all accumulations of decaying matter in privies, cesspools, drains, cellars, yards and streets—by the free use of copperas or other equally effective disinfectants in vaults and drains—by guarding all sources of water-supply from defilement, even in the most remote degree, by human excrement,—by removing the occupants of cellars, and by giving to the whole population the enjoyment of such safeguards for health as they are powerless to secure except by public authority.

There is no cause for any interruption of the usual occupation or diet of the people, or for any public alarm, but every reason for increased vigilance on the part of the boards of health of cities and towns to see that epidemic cholera shall find no foothold within the territory under their charge.

In behalf of the State Board of Health.

HENRY I. BOWDITCH, M.D.,
GEORGE DERBY, M.D.

Boston, June 20, 1873.

THERE is good reason to fear that our afflictions are not yet at an end, and that smallpox and cerebro-spinal meningitis are to be followed by cholera. This disease has, for more than a year, been travelling toward the western coast of Europe, and some few weeks ago has appeared at New Orleans, and in the Western States. We understand that there is no evidence of its importation from abroad, and that the mortality is not so great as is usual in Asiatic cholera. The fact that the disease has appeared spontaneously intimates that the precautions to be taken are such as will render all the surroundings of the people as healthy as possible. Quarantine, though important, will not alone suffice.

The municipal governments should take active measures, for the lives of many are in their keeping; individuals, on the other hand, should be urged not to give themselves the slightest anxiety, but to observe the general laws of prudence, of cleanliness and of moderation in all things.

It is very gratifying to know that the City Board of Health is taking active measures with the full concurrence and support of the government. The inhabitants of unhealthy cellars are to be removed, and a general purification of the city is to be undertaken. Efforts are making to improve the condition of the Back Bay waste lands, from which stagnant pools send most offensive odors over the neighborhood. The bad drainage of the West End is a most serious nuisance, but one that will hardly admit of immediate cure. Something must be done—but as nothing but a radical change will do any permanent good, we hope that the best advice will be speedily sought.

Continuous Discharges after Delivery.—*The Obstetrical Journal of Great Britain and Ireland*, May, 1873, contains an article on this subject by Alfred Wiltshire, M.D. The writer states that no one can have long practised midwifery without now and again having patients present themselves who complain that they continue to be drained by "colored shows" or "green waters" long after such discharges should have ceased. Such complaints most commonly emanate from patients of the poorer class, those who, by the exigencies of their life, are compelled to rise too soon from the lying-in couch, and who are, as a rule, sadly underfed, not only at and during childbed, but before and after. More rarely such complaints come from those in the higher ranks of society; here chiefly in constitutionally delicate women, or in persons who have become weakened by too rapid child-bearing or other debilitating causes. Patients are very apt to blame their medical attendant for the persistence of such discharges ensuing upon their delivery.

The *cause* of this non-cessation of the discharges may be comprehended in one word—subinvolution.

The process of involution of the uterus after parturition, is generally admitted to be essentially one of fatty metamorphosis, the effete material being removed with remarkable rapidity; so that, in a very brief space of time, the organ returns to its normal state and size prior to impregnation. Involution should progress equally in every part of the womb; but there is one part in particular in which it is important that this process should not lag, viz., the placental site, the uterine wall being thicker here than elsewhere. It is here, however, that the process most often fails, leaving a surface prone to exhale blood and other fluids; and it is here, the author believes, that the persistent "colored shows" and "waters" mostly originate.

Subinvolution is apt to occur in constitutionally feeble women, in those who rise too soon, in those who are ill-fed, and in those who are the subjects of chronic diseases, especially heart disease, and in whom the circulation is weak and the vital processes slow. Feverishness also hinders involution, and it is, therefore, important to avert or arrest all pyrexial complications.

For the constitutionally feeble, a generous diet is all important. This remark applies equally to the class of ill-fed persons—that is, persons who are chronically under-fed.

Too early rising from the lying-in couch, by throwing the heavy womb out of its proper relations, favors congestion, and lays the foundation of a series of troubles of which the "colored show" is the *avant courier*.

Attention to the symptoms is generally sufficient to establish a satisfactory diagnosis. Where examinations have been made, the presence of a subinvoluted uterus has been shown by excessive bulk and measurement, the former being determined by bi-manual palpation, the latter by the careful use of the sound. Ordinarily, increased bulk and length co-exist, but a few cases have been met with in which the womb seemed to be broadened rather than lengthened.

The *treatment* of this diseased condition may be divided into preventive and curative. We should consider how the deficient involution, upon which these untimely flows depend, may, if possible, be prevented. It is assumed that every accoucheur endeavors to secure and maintain the most perfect possible contraction of the womb, after the birth of the child and delivery of the placenta. This being arrived at, it may be said, in the first place, that all lying-in patients should, as far as practicable, be prevented assuming the erect position for several days after delivery. The next proposition concerns the question of diet, and, as a rule, all lying-in patients should be well fed. The prescription of diet must depend not only to some extent upon the habits and inclination of the patient, but also upon her general condition, especially on the presence or absence of abnormal pyrexia, as determined by the thermometer, and upon the question of her intention to suckle or wean the child.

As regards the other division of treatment, that which aims at cure, it may be said that the main object is the promotion of involution. To this end, the patient should be restricted to the recumbent position. A bandage, firmly applied around the hips so as to support the *lower* part of the abdomen, will generally give great support and be a source of comfort to the wearer. The diet should, as a rule, be generous, and is all the better for being rich in flesh-forming material. Some wine or beer is generally advisable. Occasionally, a case is seen in which there is an excess of nutrition. Here sub-involution of the womb disappears under a better regulated diet, and a little potash (or lithia) and aperients; for such patients are usually of gouty family, and habitually overfed.

The general hygienic conditions having been attended to, the subject of more direct remedies has next to be considered. Knowing the pathogeny, we are naturally led to the most suitable remedies, chief among which is ergot. But we wish not only to promote contraction of the uterus and give tone to the vascular system, we also desire to improve the blood condition and give an astringent at the same time; we therefore combine the ergot with an astringent preparation of iron—the tincture of the chloride.

℞. Tinct. ferri chloridi, m. xx.;
Ext. ergotæ fluidi, m. xx.;
Spts. chloroformi, m. x.;
Syrupi zingiberis, ʒ ss.;
Infusi calumbæ ad ℥j. ter die sumend.

In cases complicated by heart disease of a feeble type, and which do not readily yield to the foregoing, Dr. Wiltshire combines with it digitalis in the form of m. x. or more of the tincture. Strychnia is also extremely useful in some cases, and may be given alone or with the foregoing mixture in doses of $\frac{1}{30}$ to $\frac{1}{20}$ of a grain.

There is a class of cases characterized by obscure and passing attacks of pyrexia, accompanied or not by sweating or shivering. Such cases are greatly benefited by quinine, which may be given alone in five-grain doses, or be added to the mixture in doses of two or three grains. When neuralgia is present in any form, quinine is useful, and many of these patients complain of pleurodynia, mostly referring the pain to the left sub-mammary region. Again there are some patients whose general nutrition appears to have failed seriously. Usually, these are patients in whom the discharges have persisted for a considerable time, and who have neglected seeking advice. Such patients improve wonderfully under arsenic. It may be given as follows:

℞. Liquor. potassæ arsenitis, m. v.;
Vini ferri, ʒ ij., ter die sumend.

It should be given with, or directly after food, and goes well with stout or porter. Anodynes, and especially opiates, should be sparingly and carefully used.

When the bowels are constipated, and particularly when there are piles, or congestion of the lower bowel, an astringent saline aperient is very useful. The old-fashioned mixture of sulphate of magnesia with infusion of roses and sulphuric acid is an excellent combination. Now and then it may be desirable to precede this by a single mild dose of mercury.

Patients who complain of much pain are often greatly relieved by counter-irritation over the lower part of the abdomen. The strong liniment of iodine answers well. Vaginal injections are useful in some cases. Tepid, or, if possible, cold water injections promote uterine contraction. When the discharges are offensive, deodorants and disinfectants may be added. If an astringent be desired, nothing equals tannic acid. If soothing injections be indicated, acetate of lead or borax in warm decoction of poppies answers well. If injections are used, they should be copious in amount.

Hip baths, cold or tepid, are also useful in cases of subinvolution of the womb. Sea water, both for this purpose and for vaginal irrigation, may be recommended.

The French and German mineral waters are not without considerable value in these cases, and notably those containing iron and iodine in combination. The syrup of the iodide of iron is also a valuable restorative, in some cases, after the ergot and astringent iron have done their work.

Origin of Loose Cartilages.—After giving a historical summary of opinions on this subject, the *London Lancet*, of May 3d, concludes:—

"On the whole, then, whilst there seems good reason to believe that loose cartilages may develope as neoplastic formations in or around joints, it is yet highly probable that, in many cases, they are really fragments that have been detached by violence from the healthy cartilage; and that, although there may be considerable disproportion in size between the loose cartilage and the hiatus in the normal cartilage from which it has been separated, this is attributable in part to the fact that such loose fragments may have been detached before the period of complete development and ossification of the bone, partly to the subsequent growth and filling up of the injured cartilage, and partly to the growth of the fragment itself."

Correspondence.

THE PROSPECT OF CHOLERA.

MESSRS. EDITORS,—I am reminded of a promise to furnish notes of some informal remarks concerning cholera in the Southwest, made at a meeting of the Society for Medical Improvement on the 9th inst. I had then just returned from a visit to Chicago, St. Paul, St. Louis, Louisville and Cincinnati, and had met the medical health officers of each of those cities. These gentlemen were in constant communication with the health officers of New Orleans, Memphis and other cities of the Mississippi Valley. During the last of May, Dr. White, at New Orleans, was reporting twenty-five to thirty deaths a week from a disease which presented all the usual signs of epidemic Asiatic cholera. Since that time, it has extended to Memphis and Nashville. St. Louis and Cincinnati come next in order, and cases of a suspicious character have already occurred in both those places. It is probable that we shall hear of it at other points on the great highways of travel before this is in type. The cholera will not wait for the publication of weekly medical papers, and we must remember that the daily press of the western cities, while ready to furnish their readers with startling news of less importance, will be slow to proclaim the existence of anything which may injure trade. I think we must expect to deal with Asiatic cholera in our crowded cities and towns, during the present summer, and also that the presence of this much dreaded disease may be properly turned to the permanent advantage of the people, by giving to boards of health the needed power of public opinion in carrying out reforms which in ordinary seasons would be attended with difficulty.

Cholera is not an unmitigated evil. The great advance in hygiene during the past two or three generations coincides with the appearance of this pest in Europe and America. Wherever it goes, its close connection with dirt, overcrowding and foul water is popularly acknowledged. If not a blessing in disguise, an epidemic of cholera may be made to strengthen the hands of every medical officer of health, and enable him to make human life more valuable and secure for long years to come.

I enclose a copy of a circular issued yesterday by the State Board of Health. Very truly yours, GEORGE DERBY, M.D.

Boston, June 21, 1873.

Obituary.

OTHO E. WUCHERER, M.D.

IT pains us to announce the death, at Bahia, of Dr. Otho Edward Wucherer, a distinguished Honorary Member of the Massachusetts Medical Society. He was well known throughout Brazil and South America for his investigations into the nature and causes of diseases peculiar to tropical regions; and for his fearless services to the country in a severe epidemic of yellow fever, giving up his house and grounds, and even his private apartments to those sick with that disease whom others abandoned and fled from. For rendering, at a later period, such a service to some sailors of an Austrian man-of-war, then in Bahia, and thereby relieving the officers and men of great responsibility and apprehension, the Austrian government decorated him with the order of St. Joseph. His investigations into the origin of the disease called cançaço, and his discovery of its dependence upon, or coincidence with, a new form of entozoa, are well known everywhere.

He was a learned man; his native language through his father being German, and through his mother English, while he was educated in French (at Paris), and used the Portuguese in his daily walk and avocations. The ancient classics were his recreation, to which he resorted daily, whenever a large professional service gave him a moment's leisure or delay. He was one of the originators of the *Gazeta Medica da Bahia*, to which he largely contributed. Some of his observations have been translated for this JOURNAL. The profession of his adopted city have met with a great loss in his death. Apoplexy is the reported cause, but no details have been given.

JOSEPH B. BAXTER, M.D.

ON April 17th, 1872, there died in Minneapolis, Minnesota, Dr. Joseph B. Baxter, a practitioner of Provincetown and a Fellow of the Massachusetts Medical Society. He was born in Milton, Me., May 10th, 1837. He received a liberal English education, and took his medical degree from Harvard University in 1860. As soon as the war broke out, he entered the service, and was for a time employed in the hospital at Augusta, Me. He was commissioned Assistant Surgeon of the 16th Me. Vols. by Gov. Israel Washburn, May 23d, 1862, and served until the close of the war. He was greatly esteemed by his brother medical officers in the army, and at one time served under Dr. Edward B. Dalton, of New York, who says of him:—"He served under my immediate supervision in a responsible position during the last great campaign of the Army of the Potomac, and proved himself a most reliable, capable and faithful medical officer." He was at one time chief medical officer at City Point, and for some time in charge of the field hospital of the 1st Army Corps. At the close of the war he located in Provincetown, and, during the five years that he resided there, built up an enviable practice. In 1871, his health began to decline rapidly, so that he was induced to remove to Minnesota, with the hope of delaying the progress of his disease, which was that scourge that drives so many New Englanders to their graves—consumption. The inroads which the disease made were not so great upon the lungs as upon the bowels, for during his illness he never had hæmoptysis but once, about seven weeks previous to his death, and his expectoration was comparatively slight; but the diarrhœa which followed him was extremely painful and prostrating. Ulceration of the larynx took place, with all its accompanying suffering, so that for the last seven days of his life he took no food at all. His last weeks were peaceful and resigned; fully conscious of the impending change, he remained tranquil and cheerful. He closed his earthly affairs, even to the minutest details, and gave directions for the disposal of his body. He was one of those men whom it is a pleasure to know, and he endeared himself to all his friends; possessing a genial, cheerful temperament and a fund of sympathy, combined with good sound sense and abundant knowledge of his profession, he was eminently successful as a physician.

He was a prominent member of the Masonic Fraternity, being connected with King Hiram Lodge and Joseph Warren Chapter; in this connection he was much esteemed by his brethren for the extent of his Masonic knowledge. So that to all—both to patients who had learned to look to him in their sickness, and to physicians who acknowledged in him an able man and efficient co-worker; to his personal friends, who regarded him with almost the love of a brother; and to the town who had found in him a valuable servant in many capacities, his death was a loss which was deeply felt and most earnestly deplored.

Medical Miscellany.

APPOINTMENT.—Dr. Hugh Doherty, of Boston, has been appointed an Examining Surgeon of Pensions and assigned to the Boston Board.

AT the recent meeting of the Michigan Medical Society, Dr. E. W. Jenks, of Detroit, was unanimously elected President. During the meeting, Dr. Jenks read a paper on Coccyodynia, which was ordered to be published.

MASSACHUSETTS GENERAL HOSPITAL.—At a recent meeting of the Trustees of this institution, Dr. George G. Tarbell was appointed one of the Visiting Physicians, in the place of Dr. Henry K. Oliver, resigned.

A DOCTOR recently went out for a day's shooting, and, on coming home, complained that he hadn't killed anything. "That's because you have not been at home attending to your legitimate business," replied his wife.

DARTMOUTH COLLEGE.—The Pathological Museum, established through the munificence of E. W. Stoughton, of New York, is completed. It occupies the space of the old lecture room, formerly called the "amphitheatre," in the upper part of the medical building. The roof has been raised into a sort of cupola about the size of the hall, the sides of the cupola being furnished with windows enough to supply the museum with light. The vault has been neatly frescoed, and the whole interior finished in excellent style. The floor is of southern pine, with a border of black walnut and ash, tastily constructed. There are two rows of cabinets around the room, and the staircase and gallery are of solid walnut. The inside work was done by Mr. J. L. Marcotte, of New York. The expense of fitting up the room has been about $10,000.—*Springfield Republican.*

MEDICAL SOCIETIES IN SWITZERLAND.—There are forty medical societies in Switzerland, including practitioners in all the cantons except Tessin and Wallis. The largest is the cantonal society of Zurich, with 149 members. One—the Oberaargau Medical Society—is more than a hundred years old; and five others have existed more than fifty years. About half of them hold twelve or more meetings in the year; the remainder meet less frequently—from one to seven times in the year. The cantonal society of Bern possessed a fund of 9,500 francs at the end of 1871; the subscriptions to the others vary from one to five francs yearly.—*London Medical Record.*

SNEEZING.—The custom of invoking a blessing upon persons who sneeze is, says Dr. Seguin in a recent article on sneezing *(Archives of Sci. and Pract. Med.)*, a most interesting one. Several old medical authors state that the custom dates back from the time of a severe epidemic (in which sneezing was a bad sign) during the pontificate of Gregory the Great. Brand, however, and the author of an article in "Rees's Cyclopædia," state that the phrase "God bless you," as addressed to persons having sneezed, is much more ancient, being old in the days of Aristotle. The Greeks appear to have traced it back to the mythical days of Prometheus, who is reported to have blessed his man of clay when he sneezed. In Brand the rabbinical account is given, that the phrase originated in the alleged fact that it was only through Jacob's struggle with the angel that sneezing ceased to be an act fatal to man. In many countries, sneezing has been the subject of congratulations and of hopeful augury. In Mesopotamia and some African towns, the populace is reported to have shouted when their monarchs sneezed. Sometimes, moreover, it is very important not to sneeze; and Dr. Seguin has discovered, what had been discovered before but is insufficiently known, that sneezing may be prevented by forcibly rubbing the skin below and on either side of the nose. And on this observation of himself, and of Marshal Hall, Diday, and the world generally before them, he bases an exceedingly interesting study of the physiology of sneezing in health and disease.—*London Medical Record.*

A PROFESSOR of physiology, in explaining to a class of female students the theory according to which the body is renewed every seven years, said:—"Thus, Miss B., in seven years you will in reality be no longer Miss B." "I really hope I shan't," demurely responded the young lady, casting down her eyes.

FECUNDITY OF THE MULE.—A case of exceptional fertility in this hybrid is mentioned in the *Gazette Hebdomadaire de Médecine* for March, as having occurred recently at Orleansville, in the department of Algiers. A mule has given birth to a young mule perfectly formed. The medical men of the place have ascertained the fact, of which indeed many other examples have been recorded. What would be especially interesting would be, to know whether this young mule will be fertile.

NOTES AND QUERIES.

NOT RE-FORMED YET.—A correspondent in the Philadelphia *Medical Times* for May 17th, writing in favor of the American Medical Association, says:—

"It really seemed as if the meetings of that staid and deliberate body were for the purpose of giving the delegates a frolic—of relieving them for a few hours from the toils of their professional work. As far as that was concerned, the twenty-fourth annual convention was decidedly a success."

The adoption of the plan proposed in this JOURNAL last July would remedy all this.

I HAVE a patient who, for several years, was a great sufferer from sciatica. That has been relieved. The relief was followed almost immediately by loss of the senses of taste and smell. The mucous membrane of the mouth and nose are irritated by pepper, but the special senses are in abeyance. Can any one advise a treatment? X. P. Q.

A COUNTRY doctor would like to know the treatment by which the physician in charge of the Dispensary for Skin Diseases was able to remove the sequelæ of smallpox, so that victims of the late epidemic were no longer "so disfigured as to personal appearance that they could not obtain work."

ERRATUM.—On page 621, second line of table, for "two-eighths" read *two-thirds*.

MORTALITY IN MASSACHUSETTS.—*Deaths in eighteen Cities and Towns for the week ending June* 14, 1873.

Boston, 136—Charlestown, 5—Worcester, 15—Lowell, 23—Milford, 3—Chelsea, 5—Cambridge, 9—Salem, 12—Lawrence, 4—Springfield, 7—Lynn, 9—Fitchburg, 4—Taunton, 6—Newburyport, 2—Somerville, 6—Fall River, 8—Haverhill, 5—Holyoke, 9. Total, 268.

Prevalent Diseases.—Consumption, 61—cerebro-spinal disease, 16—scarlet fever, 15—pneumonia, 15.

Deaths from smallpox were as follows: Four in Holyoke, one in Boston and one in Worcester.

Deaths from cerebro-spinal disease were as follows: Six in Boston, two each in Charlestown, Worcester and Haverhill, and one each in Lowell, Lawrence, Lynn and Fitchburg.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, June 21st, 125. Males, 68; females, 57. Accident, 3—inflammation of the bowels, 1—bronchitis, 3—congestion of the brain, 3—disease of the brain, 6—cancer, 3—cholera infantum, 3—caries of the spine, 1—consumption, 20—convulsions, 1—croup, 1—cerebro-spinal meningitis, 3—debility, 2—diarrhœa, 3—dropsy, 1—dropsy of the brain, 2—drowned, 3—dysentery, 1—epilepsy, 2—erysipelas, 1—scarlet fever, 9—typhoid fever, 3—remittent fever, 2—gastritis, 1—disease of the heart, 4—intemperance, 1—disease of the kidneys, 1—disease of the liver, 2—congestion of the lungs, 2—inflammation of the lungs, 8—marasmus, 1—old age, 2—paralysis, 3—premature birth, 7—peritonitis, 1—puerperal disease, 2—pyæmia, 2—purpura hæmorrhagica, 1—stricture of the œsophagus, 1—tabes mesenterica, 4—unknown, 5.

Under 5 years of age, 48—between 5 and 20 years, 11—between 20 and 40 years. 28—between 40 and 60 years, 23—over 60 years, 15. Born in the United States, 76—Ireland, 27—other places, 22.

Supplement to

BOSTON MEDICAL AND SURGICAL JOURNAL.

IODO-BROMIDE

CALCIUM,

COMPOUND.

ELIXIR

IODO-BROMIDE OF CALCIUM, COMPOUND.

(For Internal Use.)

Medically used in Scrofula, Scrofulous Abscesses and Swellings, and all diseases of the blood traceable to a Scrofulous diathesis; in Cancer and Cancerous Tumors, Caries or diseased bone; Bronchial and Throat Affections, Pulmonary Degeneration, Erysipelas Salt Rheum, Scald Head, and Cutaneous affections; in Neuralgia, Rheumatism, Piles and Deafness, and particularly efficient as an anti-bilious remedy to combat what is commonly called "Liver Complaint."

PREPARED ONLY BY

TILDEN & CO.,

New Lebanon, N. Y., and 176 William Street, New York City.

Elixir Iodo-Bromide of Calcium Compound.

Component Parts.—Bromine, Iodine, Chlorine, Calcium, Magnesium, Iron, Sodium and Potassium.

Medical Properties and Action.—Alterative, resolvent, tonic, anti-bilious, aperient and anti-scrofulous.

This new compound, since its introduction to the profession nearly two years since, has been used in so diversified a number of cases with such uniform success as to rank it among the most potent alterative and anti-scrofulous remedies in use. The many cases in practice which have been reported to us, where it has signally asserted its therapeutical properties, justify us in offering it to the Medical Profession as a remedy of superior potency, and one on which they can confidently rely to subdue especially that class of chronic cases of a scrofulous diathesis which the ordinary approved means so often fail to reach, and also in many instances successfully to combat those pathological conditions on which a very large number of cutaneous affections depends. Its action upon the lymphatic glandular system, causing the reduction or absorption of glandular and other tumors has well attested claims. We can confidently advise its exhibition in that type of diseases which becomes amenable only to the alterative measures. In our own experience it has proved a very happy agent to combat, in scrofulous subjects, *Piles*, *Facial Neuralgia*, *Catarrh*, *Caries*, *Necrosis* and *Abscesses*, where its exhibition was invariably attended with well marked *tonic* and *aperient* properties. We have no hesitation in pronouncing the combination of properties which it possesses as preeminently gratifying. A persistent use for months, though, will often be imperatively required. The following are among the many testimonials of its therapeutical efficacy, which have been forwarded us.

In Scrofulous Abscesses, Caries, Tumors, Neuralgia, &c.

Was called August 10, 1869, to P. V., æt. 12, Irish, of a scrofulous diathesis. He had been under medical treatment for several months without appreciable relief. At the request of the attending physician I was summoned to take charge of the case. I learned that the boy was first attacked with pain and swelling in the hip, simulating acute rheumatism, which subsequently terminated in a large abscess, which required opening. Suffering intense, necessitating the constant employment of morphine in large doses for several weeks, the pain continued in violence, until abscess after abscess appeared, one on hip, one in groin, two on leg below the knee and one above—in all five. The draught upon the vitality of the system was so profuse and debilitating, that in a very short time the patient had not strength sufficient to enable him to rise from the bed. The appetite became poor, the secretions scanty, which together with the insomnia and general cachexia, apparently foreshadowed speedy dissolution. My treatment was confined to alteratives, such as Iodine, Iodoform, Iodide of Potassium, Carbolic Acid, (as a topic and internally) Arsenical preparations and the Phosphates—to tonics such as Elixir of Iron, Quinia and Strychnia, Chemical Food and Ferrated Wine of Wild Cherry, and of this class of remedies, the "Ferrated Wine of Wild Cherry," manufactured by TILDEN & Co., was the only agent which appeared to affect the system. This restored the appetite and thus far measurably benefitted my patient—though further than that the disease remained unchecked and my treatment abortive. The suppuration continued profuse and portions of dead bone were from day to day extracted. Several physicians of large experience saw the patient with me, though they suggested no alteration of the plan of treatment.

At this stage of the disease, I read in the *Journal of Materia Medica* a notice of a new remedy, the "Elixir of Iodo-Bromide of Calcium Comp." highly commended for its alterative properties and especially its power in combating scrofulous cachexia, &c. I wrote to Messrs. TILDEN & Co., for and received a bottle by express. I directed my patient to take one teaspoonful three times a day—the medicine being rather agreeable he expressed a preference for it, rather than the remedies he had been using. Upon visiting the boy after a few days, I was surprised at the marked improvement observed in the appetite and general indications of the case. I advised him to continue its use, gradually increasing the dose. In one week's time the mother calling at my office remarked, "my boy is better." During the day I saw the boy, and found the discharge was less profuse and had a more healthy appearance. Improvement continued *uninterrupted; no more dead bone* was observed after patient had *been finally placed under the influence of this new medicine.* In one month's time the boy was able to walk a half-mile from home. He is now nearly well. Since patient commenced taking "The Elixir of Iodo-Bromide of Calcium Compound," I have given him no other medicines only as was necessary to correct the disturbed condition of the secretions; consequently the combatment of the disease must be attributable to the influence of the "Iodo-Bromide."

I have since used this new agent in a large number of cutaneous diseases and am highly gratified with its effect. I consider it a *valuable acquisition* to our therapeutical agents and could not think of being without it.

April, 1871. L. ROGERS, M. D.

In Rheumatism and Piles.—Communicated by X. T. Bates, M. D.

Was called January 6, 1872, to attend M. C., aged 50 years, of a scrofulo-rheumatic diathesis. He had been under treatment for rheumatism for nearly two years, by several physicians of eminence, who agreed as to the basic disease, but differed materially as to the complication. One diagnosed a cancer of the stomach, another scirrhous affection of the liver, another suspected malignant disease of the rectum, all overlooking the real dominant morbid action. During this time he had been confined to the bed, and gradually on the decline, until he finally lapsed into a condition in which he was barely able, unaided, to raise himself in bed. Appetite poor, countenance cachectic, occasional vomiting, foul breath, fœtid odor in room, bowels confined, renal secretions scanty, much rheumatic heat in the bowels, and a distressing cough, which particularly set in at night, sometimes quite banishing sleep, while the mental depression quite equaled the physical prostration. He was also suffering from the bloody piles, and at the time of my first seeing him he remarked to me that he thought the piles were the one pre-eminent cause of his prostration. The odor of the room was very offensive and sickening, and to its malarial and nauseative influence I could but attribute one cause at least of his physical exhaustion and cachexia. Here the Bromo-Chloralum was called into requisition, and proved itself signally efficient in completely removing the odor and purifying the air. Hope entirely had deserted him of getting relief from the rheumatic fever, pain and stiffness of joints, and he solicited only a cure for the piles, and the cough. Such then was the patient's condition when he came under my treatment, and I must confess, that in consideration of the chronic character of his complaints, and ability of his medical advisers, that I had little hope of benefitting him. But having read in the "Journal of Materia Medica" the gratifying experiences of the Profession with the Elixir Iodo-Bromide of Calcium Compound, in both rheumatic and scrofulous affections, and having myself used this "Compound" with marked success in many conditions when I thought only an *alterative* was required, I thought here also to try its power. I consequently prescribed:

℞. Elixir Iodo-Brom. Cal. Comp.,.......................... ℥ viii.

Take one teaspoonful 3 times a day for 3 or 4 days, after which duplicate the dose; and for his distressing cough I prescribed:

℞. Syrup Tolu, Syrup Wild Cherry,.................... aa ℥ ii.

Take one teaspoonful "pro re nata." In one week's time the cough was better, but in other respects his condition was unchanged. Nevertheless I continued the above treatment, and in about a month thereafter my patient began to experience considerable relief from the piles, and the system generally to recuperate. He has continued to improve, and now both the cough and the piles have succumbed, the rheumatic fever is less severe, the cachexia passing off, and his general strength greatly improved.

Even though the "Iodo" may not be successful in dislodging and eradicating the rheumatism, in that it has but restored strength, and cured the piles, it has proved itself a powerful and useful remedy, and a valuable acquisition to the "Materia Medica." I have found the Elixir Iodo-Bromide Calcium Compound by far the most *satisfactory alterative* I ever used.

In Scrofulous Swellings and Ulceration.—W. B. Ansley, M. D., Apollo, Pa., writes:—"In regard to the Iodo-Bromide of Calcium, Compound, I will say, it seems to be *all* that we could desire. I will only give the outlines of *one* case out of several of a similar kind that I have treated with this remedy.

Robert J——, aged 26,—English,—came to me for treatment, Sept. 15, with scrofulous swelling and ulceration of the cervical, lymphatic glands, of 18 months' standing. Two of these glands were discharging freely characteristic scrofulous pus, and some four others were much swollen, two of them seemingly just ready to break down, which they afterwards did. His history showed the disease to be hereditary. His general health was completely broken down, so that he could not follow his usual occupation, that of a sheet roller. He was placed on the following medicine:

℞. Elix. Iodo-Brom. Cal. Comp., (Tilden's.)
Fluid Ext. Sarsap.,—aa., ... ℥ iii.
Sig.—Dessert spoonful 3 times daily.

To the glands he applied ointment of Iodide of Cadmium. He was also directed to take as much out-door exercise as possible, and live on a nutritious diet, avoiding alcoholic stimulants. The first ten days he did not show any signs of improvement, bus from that time on he has improved steadily, continuing the use of the medicine, as originally prescribed, with but few intermissions. He may now be considered cured,—the ulceration having healed and the enlargement entirely gone. He has resumed work, but will continue using the medicine as a precautionary measure. In closing I may add that he had been treated during the entire 18 months before coming to me by some able physicians."

In a Case of Scrofulous Abscess.—Dr. M. F. Harvey, (Ontario, Canada) writes. "The Elixir Iodo-Bromide Calcium Compound is a magnificent remedy. I am using it with marked success in a case of Scrofulous Abscess in the upper part of the femur.

I think more of this remedy than all the many alteratives I have noticed in medical journals for the last two years."

SOUTH BERWICK, ME., August 27th 1872.

In Old Affections of Joints and Bones.—

Gentlemen,—I take pleasure in being able to report the following case, showing the great value of the Iodo-Bromide of Calcium Compound, in old affections of the joints and bones. I was called some two years and a half since to attend a returned soldier, thirty years of age, his left leg was enormously swollen and painful, especially about the ankle. He was greatly emaciated and anæmic, had sympathetic or hectic fever. He was very low indeed and not expected to live by any one who saw him. He had been under the care of many physicians, the limb had been injured on board a transport ship by the fall upon it of a heavy box—I examined the ankle carefully and concluded to pass an exploring needle, and at once detected pus in several localities. Incisions were then made and free exit afforded to the retained ill-conditioned fluids; upon searching with a probe the tibia was found roughened and diseased in several sites—tonics and restoratives were given of Bark, Iron, Arsenic, &c. The success was not satisfactory—The patient gradually failed, his appetite gave way, diarrhœa set in, a cachectic state ruled the case, the man was utterly exhausted and there seemed to be no chance of his recovery. At this time I was induced to make a trial of the Elixir Iodo-

Bromide of Calcium Comp., a teaspoonful was given properly diluted three times a day. The Solution was also locally applied diluted with alcohol and water, four parts. The result was very gratifying, my patient at once began to rally under the tonic and alterative influences of the remedy—His appetite returned, also his color and flesh, the discharges lessened, the swelling abated and the pain and condition of the joint and bones improved—soon dead pieces of bone ceased to come away, and in two months he rode ten miles to see me; from that time he made a rapid recovery.

He is now a stout, fleshy, strong man, and owes his life to the use of the Iodo-Bromide of Calcium Compound. The joint is still somewhat impaired as to its free action, but the man walks very well and attends to the labors of the farm, and requires no further professional attention.

I have only to say that I have great confidence in this remedy and shall continue to recommend it and use it in ill-conditioned affections of the bones and joints whether the results of accidents alone, or as connected with scrofulous or other cachectic states of the system. Very Respectfully, THEO. H. JEWETT, M. D.

BATH, ME., Sept. 3, 1872.

In Chronic Affections, Incipient Lung Diseases, and Cancer of the Stomach.—I have used the Elixir Iodo-Bromide of Calcium Compound, with very marked success in many cases, and regard it as one of the best tonics and alteratives, in all scrofulous diseases, I have ever met with.

I have used it with much benefit in cancer of the stomach, and other local diseases of a kindred nature with excellent results. I have also used it in many cases of incipient lung disease with marked success. In cases of chronic ulcers, I employ it internally, using the Bromo-Chloralum externally, applying it two or three times a day to the ulcerated surfaces, and uniformly with the best results; the improvement in all the cases has been rapid, and at this time bids fair to be permanent.

I regard it as a valuable remedy, one worthy of the attention of the medical profession. I think I was the first to use it in this part of the State, and have done so quite extensively, and feel sure, if judiciously prescribed in cases adapted to its use, it will seldom fail to accomplish all that is claimed for it.

Yours Truly, A. J. FULLER, M. D.

TOPEKA, KANSAS, July 12, 1872.

In Cerebro-Spinal Meningitis.—I take pleasure in reporting two cases of *cerebro-spinal meningitis*, occurring in my practice, in which I found your new preparation, the Elixir of Iodo-Bromide Calcium Comp., of great service.

The first was that of a boy aged 9 years, who was first taken with severe lancinating pains in the Cranium—extending down the back and to the limbs—followed by delirium—attended with the usual symptoms—pupils of eye alternately dilating and contracting—restlessness—pulse about 120—articulation very difficult. I gave him Quinine and Dover's Powder freely, alternated with the Iodo-Bromide and followed up this treatment for several days—using Leptandrin occasionally to regulate the bowels, when the worst symptoms were greatly relieved. He could not however use his limbs—I persevered in the use of the Elixir for several weeks and finally had the satisfaction of witnessing my patient's restoration to health.

In the other case which was of the same general character, I administered the Elixir more freely in the first instance, using less of the Quinine and Dover's Powder. All the symptoms subsided within three or four days. I am inclined to the opinion that the Iodo-Bromide of Calcium Comp., in conjunction with Quinine and Dover's Powder will cure all such cases, and I take great pleasure in bringing those above cited to the notice of the profession through the columns of your valuable Journal. Very Truly Yours, E. TEFFT, M. D.

In Chronic Irritable Ulcers.—Dr. S. H. Potter, of Hamilton, Ohio, says: Allow me to express my sincere gratitude for your offer to send me a quantity of the Elixir Iodo-Bromide of Calcium Compound. It has proven itself in every case a very valuable and potent remedy. I have been using it on a Chronic Irritable Ulcer on my own person arising from a severe contusion five years since.

Singular as it seems nothing else promotes healthy granulations, nothing else can be tolerated, and yet this acts like a charm.

Both internally and externally I have found it more efficacious than any other medicine that an experience of forty years of devoted practice enables me to select.

Baltimore, Md., Aug. 1st., 1872.

In Bilious Disorder.—Gentlemen,—It affords me pleasure to say that I have derived the most beneficial effects from the use of the Elixir of Iodo-Bromide Calcium Compound. I had been suffering with biliary disorder for a long time, and recently was salivated to such an excessive degree as to produce general derangement and great physical prostration.

The taking of but two ounces of the above mixture has produced a normal action of the liver and restored me to a healthy condition.

Yours with respect, A. D. GREENTREE, 373 Franklin St.

New York, August 15.

A Physician in New York writes:—

"The Elixir has been given to an elderly person, with a severe cancer of the face, with the effect of stopping the gradual destruction of the blood vessels, and great loss of blood when dressed, with also a change in the character of the secretion, increase of appetite and general strength. This is good so far and much better than expected, as the case may be considered incurable by any remedy."

No. 21 Biddle St., Baltimore Md., Aug., 20, 1872.

Gentlemen—For over two years I have been suffering with great nervousness and debility. During all that time I have been in an irritable state—my general health has been impaired—my appetite destroyed and I have been sleepless and restless at night. I tried various remedies to improve my condition without avail, until my Physician induced me to take the Elixir of Iodo Bromide Calcium Comp., the use of which has completely cured me of my ailments.

Yours Respectfully,
WILLIAM BARROW.

Use of Elixir Iodo-Bromide of Calcium Comp., in Deafness, resulting from Scarlet Fever.-By X. T. Bates. M.D.-During an epidemic of Scarlet Fever in B——, Vermont, Mrs. W., was attacked by this malady and in the convalescent state discovered that her hearing had become somewhat impaired. This impairment gradually increased until fears were entertained both by herself and friends that she would ultimately lose her hearing entirely. At the suggestion of her husband whom I had previously treated for a similar disorder, she was induced to try the following prescription:—

℞ Elix. Iodo-Bromide Calcium Comp., - - - - - - Oss.

Sig.—One teaspoonful in half a wine-glassful of water, one hour before each meal.

Improvement soon manifested itself, and in a few weeks a thorough cure was effected.

Within a month I have had the pleasure of seeing this patient and was informed by her that she alone of several who were similarly affected had escaped permanent deafness—a result to be attributed entirely to the use of the Elixir.

Macedon, Wayne Co., N. Y., Oct., 31, '71.

Extract from Letter of Dr. C. S. Lacey.—"I wish to say one word in regard to two of your preparations, the Elixir Iodo-Bromide of Calcium Comp., and Bromo-Chloralum. I have used them in conjunction in treatment of chronic ulcers—giving the former internally, and using the latter externally—with very satisfactory results indeed—I have administered the Elixir Iodo Bromide Calcium Comp., in Salt Rheum and other skin diseases with marked success.

Boonville, Oneida Co., N. Y,, Nov., 16, '72.

Extract from Letter of J. B. Nobel, M. D.—"I have used the Elixir of Iodo Bromide of Calcium Comp. with excellent results in cases of cachexia—also in a case of Liver Complaint complicated with Rheumatism, when there was, moreover, a scrofulous tendency. I have prescribed it in Bronchial and throat affections with very gratifying success—and generally in all cachectic cases."

Please send me ½ doz. bottles of the Elixir and two bottles of the Solution.

Office of Japanese Embassy, Washington, D. C. June 25, 1872.

Letter from the Surgeon of the Japanese Embassy.--Dear Sir—I have much pleasure in stating that I have made a careful trial of the preparation which you forwarded to me known as the Elixir of Iodo-Bromide of Calcium Comp. I have found it singularly efficacious in the treatment of secondary Syphilis, a number of severe cases having been lately under my personal observation.

One case in particular attracted my attention not only from the length of time the patient had been suffering from the symptoms which were very severe, but also from the fact that a long course of the treatment usually adopted in such cases had utterly failed to make an impression upon the symptoms or to avert the progress of this formidable disease.

Two months ago I commenced using the Elixir Iodo-Bromide in this case. The patient, who is a young man of twenty-eight, then presented the following appearance.—A large number of obstinate copper colored eruptions were visible on the skin, over the face, arms, chest and limbs, and his muscular system was much emaciated, being also troubled with an obstinate cough and the expectoration of blood. The mucous membrane of the throat and tongue was covered with greyish ulcerations which had the effect of rendering the voice husky and indistinct; besides this the patient complained of loss of appetite and inability to sleep from severe darting pains in the joints and limbs. He had contracted an indurated chancre about five years previously which healed in about three months—had been suffering from secondary symptoms nearly four years and was very much depressed in spirits—afraid he could not get well &c.

I thought this a good case for the trial of the Elixir and commenced giving it in teaspoonful doses 3 times daily, one hour *after meals*. As this dose did not disorder the stomach and appeared to increase the appetite, at the expiration of ten days I gave him two teaspoonfuls 3 times daily in a little water, and have continued it steadily ever since with the following results:—At the end of the first fortnight the patient was much improved in spirits, with increase of appetite and greater vigor in the digestive organs. There was likewise a marked diminution of the nocturnal pains, with diminished cough and expectoration.

At the end of the first month, the cough had entirely disappeared and the patient had excellent appetite, while the ulcers in the throat were showing a disposito heal. At the present time nearly two months have elapsed since the first exhibition of the Elixir, and the patient himself says he is nearly well.

He has improved greatly in health and strength—the spots on the surface have almost entirely disappeared, and the ulcerated state of the mouth and throat has improved in a most remarkable manner.

These excellent results I must attribute entirely to the Elixir Iodo Bromide Calcium Compound and I consider it the best medicine I have ever used in cases of this kind.

I remain, Dear Sir, Yours Truly,
ROBERT. J. SLOAN, M. D.
Surgeon to Japanese Embassy, late Surgeon U. S. Army.

Elixir Iodo-Bromide of Calcium Compound in Deafness.—By X. T. Bates, M. D. Accident first called my attention to the utility of this Compound in deafness, a little more than a year since, when I was called upon to visit a young man, a merchant, of sedentary life, who had recently returned from the West in so debilitated a state that it necessitated his entire relinquishment of business. It appears early in January, he contracted a severe cold, which seemed to exhaust its energy in the head, setting up acute otitis which terminated in intensifying to a high degree the partial deafness to which he had been a victim for half a score of years, and in addition accompanying it with intolerable *tinnitus aurium*, and subsequently there was loss of appetite with much languor and debility in which every organ seemed to participate. He sought and obtained the best medical advice and was under treatment three months, during which time both the deafness and atony were manifestly growing on him. Countenance becoming cachectic.

appetite, strength and ambition constantly on the decline were grave indications which appeared rather to foreshadow early dissolution. His medical attendants finally urged both a change of clime and employment.

Such were his physical condition and promises when he came to me for advice. Bearing in mind the several valuable elementary constituents of the "Elixir Iodo" and my former happy experience with this medicine in scrofulous subjects to combat *Piles*, *Neuralgia*, "*Sympathetic Catarrh*," *Caries*, *Necrosis*, and scrofulous abscesses, when I had employed it with very uniform success, I thought here to try its efficacy as an appetizer and general alterative, with little or no expectation of removing the cause of deafness which I diagnosed Scrofulous induration of the Tympanum. My prescription was:

℞ Elixir Iodo Bromide Cal. Comp........................... Oj.

Take one teaspoonful in a half wine-glass of water three times a day, one hour before meals—after a week's time increase the dose to two teaspoonfuls.

I soon lost sight of the young man, and heard no more of him till after a period of four months when I received a letter from him wherein he requested a renewal of the prescription I had previously given him, stating that it had been the means of affording him great relief, that while under my treatment, both his appetite and strength rapidly improved, spirits revived, and deafness appeared rather to succumb, and his general health so immeasurably improved, that he at length was enabled to resume business relations. But no sooner did his medicine become exhausted than his old symptoms recurred. He then consulted his family physician, who made several applications of Nitrate of Silver to the ear, and also subjected him to constitutional treatment, which was persevered in for a space of three weeks without any perceptible benefit.

I immediately forwarded a duplicate prescription with the request that he should inform me from time to time of his condition. But I heard nothing direct from him until January of the present year, when I received the happy intelligence that he was enjoying a degree of health to which he had been a stranger for years. He had barely used the medicine two days ere he began to experience relief, and within an interim of three weeks, his hearing was restored almost completely. His own words are:—"I could hear better than any time within the past ten years." I have recently learned the young man is quite well and now actively engaged in business. Whenever indications foreshadow a recurrence of his former malady, he resorts to the "Elixir Iodo" with corroborative results. Here constitutional measures by means of the "Iodo" alone, effected the cure, for no topics were used either by the syringe or aurilave.

My experience with the elixir in deafness has not been confined to the above recorded case, but I have prescribed it in four other cases, in only one of which did it disappoint me, and here the patient neglected to use it the length of time required in a fair trial. In the majority of subjects even when it is potent to disarm and conquer the morbid processes which go to form diseased structure, I regard a persistent use necessary, until from *two* to *three* pints of the "Comp." have been introduced into the system. I shall contribute my further experience with it in similar cases,

SOLUTION

IODO-BROMIDE CALCIUM, COMP.

(For External Use.)

Medically used externally, in Neuralgia, Chronic Rheumatism, Salt Rheum, Scald Head, Eczema, Itch, "Prairie Itch" or "Prairie Mange"; Psoriasis, Herpes, Prurigo, Scabies, Gangrene, Scrofulous Swellings and Sores, Cancerous Swellings or Sores, Sloughing Sores. It also possesses superior efficacy as a Rubefacient, possessing manifest advantages over the ordinary counter-irritants.

Iodo-Bromide of Calcium, Compound.

Component Parts.—Bromine, Iodine, Chlorine, Calcium, Magnesium, Iron, Sodium and Potassium.

Medical Properties and Action.—Antiseptic, disinfectant, rubefacient, stimulant, and in its pure state somewhat caustic and irritant.

We take pleasure in presenting to the Profession this new and valuable combination, confident that only a trial will be necessary to support its claims as a topic superior to any which has heretofore been placed in the hands of the physician.

Properly diluted it becomes readily absorbed, increasing the action of the secreting organs, and if sufficiently long continued appears to act specifically upon the lymphatic glandular system, causing the reduction or absorption of glandular and other enlargements, and also exhibiting its alterative influence, whereby a certain type of diseases becomes amenable to its use.

It has been used with very uniform success in a remarkably large number of diversified cases, both to alleviate neuralgic and rheumatic pains, resolve tumors, combat local and cutaneous affections, to excite local action in indolent ulcers, and to destroy diseased surfaces and their secretions in sloughing sores.

As a Rubefacient, it is trustworthy and efficient, easy of application, never causing vesication when properly applied, and consequently not open to this and greater objections that may be urged against collodion and the cantharidal liquid. An examination of its elementary constituents is a sufficient guarantee of its potency and perhaps the most satisfactory recommendation that could be desired.

Applied in its pure state, it produces intense local action, and often causes a powerful sensation of pricking and smarting. It should be diluted according to the sensibility of the parts to which it is applied. For ordinary purposes, one part to four of water or diluted alcohol is a sufficient dilution.

In our hands it has seldom failed to give relief, though we have prescribed it in very many cases. We have known cases of ordinary *Itch* yield to it by *one application*, even after an obstinate resistance of months to the usual remedies, and no less gratifying results have we seen follow its use in *Psoriasis*, *Herpes*, *Prurigo*, *Sca-*

bies, *Gangrene*, *Scrofulous Sores*, *Sloughing Sores.* It possesses also a superior efficacy in *Chronic Rheumatism* and will sometimes give almost immediate relief. In *Acute Rheumatism*, we have not used it, for the reason, that its effect is to dislodge the disease, and we should suggest its use in acute cases only when the disease is about the chest or vital parts. A weak solution will be found advisable in removing *pimples on the face.*

We are constantly receiving from physicians testimonials in favor of its therapeutical potency as a topic from which we select the following as sufficient perhaps to illustrate its wide range of application.

Scabies or Itch.—Dr. B., writes; Scabies or Itch may be cured most rapidly by Iodo-Bromide of Calcium Compound. Even inveterate cases have been completely cured by this without any annoyance or interruption of the patient's ordinary business. A few applications will generally be sufficient to destroy the parasite. It gives prompt relief from itching.

Several cases in practice have been reported which were successfully treated by this agent alone; one particularly interesting case, that of a child, male, aged fourteen years, of a scrofulous diathesis, who had been under medical treatment for over a year without any noticeable improvement, which was promptly cured by the following:

℞. Iodo-Bromide of Calcium Compound, ... ℥ i.
Water, ... ℥ iv. M.

Sponge parts affected, twice daily. Suspend if it produce too much irritation —to renew if necessary—graduating strength to suit.

This method of cleansing the system of scabies is evidently a great improvement upon the use of disgusting sulphur-ointment, or the more dangerous arsenic and quicksilver preparations. I have even found it decidedly serviceable in:—

Rheumatism.—In this affection I use two parts diluted alcohol (*i. e.* equal parts alcohol and water) or water and one part of the Compound; bathe the affected surface with it warm, rub well and then cover with flannel moistened with it. If it produce too much irritation I reduce with alcohol or water; though giving alcohol a decided preference.

Chronic Rheumatism.—Dr. B., reports the following case:—A. M., male, aged fifty years, had been afflicted with rheumatism in the hip joints for several years; at times completely disabled; had gone through a long list of drugs without any good effect whatever; was almost instantly relieved by the Iodo-Bromide of Calcium Compound, and now relies upon this topic to banish pain whenever it recurs. In this case used the Solution diluted with alcohol, but sufficiently strong to produce well marked irritation.

Rheumatism.—Dr. Tefft of Topeka, says; "Have used the Iodo-Bromide of Calcium Compound with the best of success. My father used it in a case of Sciatica Rheumatism in a child about nine years of age; the child is doing well, able to go around the house now.

I tried it in a case of Chronic Rheumatism, in a patient about fifty years of age, he said he had tried about every medicine that he had ever heard recommended for Rheumatism, and when I commenced I considered the case hopeless, but he says that the pain has left his feet and legs, and that he feels better than he has before for years.

From the success I have had, I regard it as the best medicine for Rheumatism I ever used.

A friend and neighbor afflicted with Chronic Rheumatism informs me that he derived great benefit from its use, the muscular soreness and stiffness being almost immediately removed, by sponging with the Iodo-Bromide, about two parts of water to one of the solution; when more diluted the effect was not so speedy nor so perceptible."

In Neuralgia, Rheumatism, and Otorrhœa.–S. R. Nissly, M. D., Pemberton, Ohio, communicates to us his success with this new compound as follows:

"I have tried the Iodo-Bromide of Calcium Comp. in several cases externally with the happiest results. I relieved one case of obstinate Facial Neuralgia by two applications; its prompt relief was almost magical in this case. I also tried it in one case of Hemicrania, and three of Chronic Rheumatism, (Lumbago). I have been treating a case of Chronic Otorrhœa with sanious and fœtid discharges. I tried argenti nitratis, zinc chlor., liq. plumb. subacetatis and I have failed in arresting the discharge; it is some eight years' standing, the sequelæ of Scarlatina. I concluded that I would try the Iodo-Bromide of Calcium Compound. I diluted the compound 1 part to 1 part of water, and injected the solution for three consecutive days, and to my utter surprise I have succeeded in arresting the discharge completely, and the patient expresses herself cured. Have you ever used the Compound internally?

In Cancer of the Rectum.—Dr. S. H. Potter, of Hamilton, Ohio, writes "I have recently used the Iodo-Bromide of Calcium Comp., in a cancroid tumor of the rectum, and have been highly gratified with its action. After using this remedy two days per enema twice a day, the bloody and morbid discharges ceased. In conjunction with this topic I prescribed "Fowler's solution" and the Acid Tincture of Iron to be alternated.—Under this treatment the patient has rapidly improved.

Stateburgh, S. C., Aug. 7, 1871.

Elephantiasis.—Dr. A——I have used it in a case of Elephantiasis of some twenty years' standing, and I think with decided benefit.

Psoriasis.—The treatment of this, as well as other affections of the skin, will be regulated by the age and constitution of the patient, the stage of the disease, and its complications. In the way of local treatment, the Iodo-Bromide of Calcium Compound will answer best, diluted with water, and in such proportions as the circumstances of the case may direct.

At the outset of this disease, and in direct proportion to the degree of irritation present, remedies should be emollient in character.

Eczema.—The cure of this affection is attained by constitutional and local treatment. When the disease has passed into the chronic stage, *irritability or sluggishness*, which calls for stimulant remedies, a solution of Iodo-Bromide of Calcium Compound, properly diluted, will be found eminently useful.

A Physician thus writes, Feb. 2, 1871. "Accept my thanks for the bottle of Iodo-Bromide of Calcium Compound. I have used it in a most inveterate case of Eczema, and find more relief to the terrible itching than from any other medicaments that I have used. The case is progressing finely but my Iodo-Bromide is gone; will you therefore send me more immediately, for I dare not be without it; the success of the case depends upon it."

Another Physician writes, Feb. 20. "I have used your preparation of Iodo-Bromide in a case of Salt Rheum with excellent success; it is a case of long standing which seemed incurable and requires patience, and is now better than for years past. I have used it in many skin affections always with success. Its application is very wide in the hands of an intelligent Physician, and I regard it as one of the most valuable remedies you make."

Scald Head.—Another writes he has applied it in this disease and effected a cure, and promises a report.

In Prairie Itch and "Prairie Mange."—Mark Ranney, M. D., (Iowa Hospital for the Insane, Mount Pleasant, Iowa), writes:

"I have been much pleased with the action of the Iodo-Bromide of Calcium Compound, in that somewhat intractable disorder of this region known as Prairie Itch" and "Prairie Mange". It has proved in my hands the most effective remedy that I have tried for its treatment.

The Elixir of the same, I think, is a valuable addition to the physician's list of remedies for a state of ill health in which vitiated secretions are prominent symptoms. I shall make further use of both the above named preparations."

In Rheumatic Pain, and Scrofulous Eruption.—L. C. Edwards, M. D., (Beaver Springs, Pa.,) advised the use of the Solution Iodo with the following remarkable success:

"The "Iodo-Bromide," in my opinion, has rendered very unexpected service in removing rheumatic pains; and even removed the signs of a scrofulous eruption on the upper right arm. Similar signs preceded several abscesses on the right leg, before we had the "Bromide," and also one on the right shoulder. Exfoliation took place both at the leg, and upon the shoulders. But after using the Bromide upon the arm, the enlargement which was deep seated, was drawn to the surface in the form of little white pimples from which ossified or granulated matter was taken. We shall continue its use."

In a Case of Cancer.—Communicated by H. H. Pierce, M. D., Rutland, Vt.

"I have made constant use of your disinfectant, "Bromo-Chloralum" in the case of the patient that I am attending, suffering with Cancer, at this place. It works like a charm, and keeps the air perfectly pure.

I am also using the "Iodo-Bromide of Calcium Comp.," as a lotion and the Elixir of the same internally, in the same case with the happiest results. They have far exceeded my expectations. My patient is greatly improved, and able to walk about his room. I would like to have you send me the same amount of "Bromo-Chloralum" and of the Elixir for the patient, that you left me on your visit here, as I am very nearly out of both."

EXTRACTS FROM RECENT CORRESPONDENCE.

Windham, Johnson Co., Iowa, Feb. 19th, 1873.

Extract from Letter of Albert Dunlap, M. D.—"I have used the Elixir Iodo-Bromide Calcium Comp. in my practice and it has proved very useful as an allerative and in old chronic cases. The 'Bromo-Chloralum' is a valuable article and merits public confidence."

Easton, Talbot Co., Md., Feb. 18th, 1873.

Extract from Letter of Julius A. Johnson, M, D.—"I cannot close without saying how much I appreciate your invaluable deodorizer and disinfectant, BROMO-CHLORALUM. I think it one of the best remedies of the age. I have given it severe tests and never found it to fail. I always use it and would not be without it at any price."

Fremont, Wayne Co., N. C., Feb. 12th, 1873.

Extract from Letter of Dr. W. Gilbert.—"Your Syr. Iodide Potassium and Sarsaparilla internally and Solution Iodo-Bromide Calcium Comp. externally, have unlocked the joints of a lady, suffering from chronic rheumatism, for the first time in six years."

City Dispensary, Denver, Col., Dec. 23d 1872.

Extract from Letter of M. Mayer-Marix, M. D.,—"Please accept my thanks for the supply of the Iodo-Bromide of Calcium Comp., you so kindly sent us some time since. I waited, before acknowledging the receipt of the remedy, until I could test it in affections for which it is recommended. After a thorough trial in various diseases dependant upon a scrofulous diathesis, I am more than pleased with its prompt remedial effect.

Dunkirk, N. Y., Dec. 29th, 1872.

Extract from Letter of Dr. P. A. Molling.—"I have used lately one-half dozen bottles of your most excellent Elixir Iodo-Bromdie of Calcium Comp. in chronic sore legs, and must confess, with an almost unequalled success in every case. I could send to you several pleasing testimonials."

Laconia, N. H., Dec. 25th, 1872.

Extract from Letter of D. S. Prescott, M. D.—I used the Iodo-Bromide of Calcium Comp. in a case of ulcerated lachrymal sack of long standing, by injecting it diluted, into the sack and washing about the parts, and giving it internally; six months wrought a great change. Am now trying it in a case of otorrhœa of one year's standing, with decided benefit.

Bromo-Chloralum.

RECENT CORRESPONDENCE.

WARREN CO., IOWA, Feb. 18th, 1873.

Extract from Letter of J. M. Jaillette, M. D.—"In regard to the efficacy of 'Bromo," permit me to add my report of last year on Blenorrhagia. I treated ten cases, using no other agent to effect a cure. After an injection of Bromo *properly diluted*, the discharge was arrested in less than twenty-four hours. To my surprise and their gratification they were all able to resume the active duties of life on the fourth day after the treatment with 'Bromo.'"

YONKERS, N. Y., Feb. 7th, 1873.

Extract from Letter of Wm. H. Veitch.—"Upon the suggestion of Dr. Pike, who is Health Officer in this city, I made use of Bromo-Chloralum when called upon, in my capacity as undertaker, to attend to the burial of a person who had died of small-pox. I have never experienced any ill effects from being in close proximity to this disease, and would not hesitate to be in contact with any contagious disorder, when furnished with this article."

SARATOGA SPRINGS, N. Y., Feb. 4th, 1873.

Extract from Letter of H. H. Martin, Jr., Undertaker.—It is with great pleasure I can say, that I have thoroughly tested Bromo-Chloralum. I have used it for the last two years and never had it fail of removing all the smell arising from the presence of the dead. I will state a case where I used it last summer. The person mortified before death. They had in the house Chloride of Lime and other disinfectants, which they used, and then could not stay in the room. It was the worse case I ever met with. So offensive was the smell, they thought they would have to bury him before the time appointed for the funeral, but I told them I had something which would remove all smell from the room and house in a short time. I used about half of a pint bottle of 'Bromo,' applied with cloths moistened and laid upon the person. The coffin was put into the hearse and taken to the church. After the funeral it was opened and, to the surprise of all, there was no odor noticed whatever. I will say here, that it is the very best thing of the kind I have ever used or tried.

EASTON, Jan. 27th 1873.

Extract from Letter of Julius A, Johnson, M, D,—Assistant Physician in Talbot Co. Alms House.—"On Wednesday, Jan. 8th, I put the 'Bromo' to a severe test. We had a patient with both feet frosted to such an extent as to cause gangrene, and the loss of all the toes of both feet. The patient was confined to a small room, the odor of which was horribly offensive, as you may imagine. The disinfectant was diluted about eight parts of water and sprinkled on the floor and bed, and the cloths his feet had been wrapped in. Cloths were also hung up around the room, saturated with the Bromo, I then went out for about ten minutes, and on my return, the offensive odor was hardly perceptible.

FROM JULY, 1873, TO JANUARY, 1874.

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CONTRIBUTORS TO VOLUME LXXXIX.

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Original Communications.

TWO CASES OF OVARIOTOMY.

By John Homans, M.D. Harv.

Case I.—*Double Ovariotomy; Death; Autopsy; Peritonitis; Cancer of the Stomach and Peritoneum.*—A single woman, a domestic, 32 years of age, entered the Carney Hospital, June 8, 1872. The right umbilical and iliac regions were occupied by a hard tumor, irregular in shape and outline, and somewhat flattened; the growth, also, projected downwards between the uterus and rectum. The girth at the umbilical level was twenty-nine inches, and it was fourteen inches from the sternum to the pubes. The tumor or tumors were freely movable and there were no adhesions. Fluctuation was doubtful. The needle of the aspirator was entered at the most elastic spot, and about a drachm of clear straw-colored fluid was drawn out. The bladder was depressed. The uterus was normal in situation, the cervix being quite short; the length of the uterine cavity was normal. The woman's health had been fair until four months since, when she experienced a feeling of soreness across the centre of the abdomen. Two months later three tumors about the size and shape of flattened lemons were noticed in the right iliac region. At the time I first saw her, there was considerable emaciation, and much pain and vomiting. She begged that an operation might be performed, and hoped that she would be relieved from her distress either by recovery or death. She had come from Worcester, having been induced to do so because another woman, with ovarian tumor, from that city, had been cured at the hospital.

On June 18th the operation was performed. Drs. Langmaid, Hayden, Cowles, Draper, Wheeler, C. D. Homans, J. O. Green and several other gentlemen were present. She was placed on the table in a fine large airy room, overlooking the city and harbor; the rubber sheet with an oval opening was placed over the abdomen and clothes; it was kept on by adhesive plaster spread on its inner edge, in the manner that Mr. Spencer Wells practises. She was then etherized. The cysts were exposed by an incision extending from two inches above the umbilicus to the pubes. Several cancerous-looking nodules were seen in the peritoneum in the line of incision. The abdomen contained about four pints of clear ascitic fluid. The right ovary was first removed; there were no adhesions; the pedicle was clamped, but the clamp was removed on account of the dragging on the uterus. A silk ligature was applied and cut off short. The left ovary was then removed, and the pedicle secured by a silver wire ligature, and, as there was some hæmorrhage, by a silk one also; both were cut off short. The wound was closed by deep and superficial sutures of silk.

The right ovary, the one first removed, was found to be nearly solid; its structure was cystic, the cysts varying from those of microscopic size to the size of an English walnut. The whole mass was about as large as the adult human brain. The left ovary was of the same structure as the right, but not as large. One weighed four and a half pounds, the other three. Cotton batting was laid over the abdomen, and a binder of sticking plaster applied. It was curious to see the ascitic fluid collect in the pelvis during the operation; the pelvis would be sponged dry, and in a few minutes a drachm of clear, limpid serum would accumulate, seemingly poured out from the peritoneal walls. The pulse was 120 after the operation, and the respiration feeble.

June 19th. There was no vomiting till midnight, eight hours after the operation. At 7, A. M., the pulse was 146. There was great thirst, but no tenderness, or pain. The vomiting continued with more or less intermission till her death, which took place at 2, A.M., June 20th, about forty hours after the operation.

At the autopsy, the incision was found firmly united. The coils of intestine were of a red color, and covered more or less with flakes of lymph, which glued them together. Dr. Fitz examined the stomach and found in it a tumor about the size of the palm of the hand, occupying nearly the whole of the lesser curvature. It was ulcerated, especially toward the centre, the mucous membrane being destroyed. Nodules of cancer were found on the uterus, mesentery and peritoneum. In this case, the patient's pain, distress and vomiting were caused by the cancerous affection of the stomach and bowels, and not by the more obvious ovarian disease; and had the exact condition of things been known, the operation would not have been performed. By her death, however, she was spared much suffering.

Case II.—*Ovariotomy; Death; Peritonitis.*—A single woman, 49 years of age, a school-teacher, came to the Carney Hospital from Nantucket, on April 22, 1873. A large cyst filled the abdomen from the sternum downwards. It had been of seventeen months' growth. The girth at the umbilicus was forty-five inches, and it was twenty-two inches from the sternum to the pubes. She was in good spirits, and her general health was fair, though feeble. Both feet were somewhat œdematous, and there was a trace of albumen in the urine. The uterus was normal and virginal. The catamenia ceased a year ago. The pulse was 76, of fair strength.

The patient decided to have the operation performed, after its dangers had been fairly placed before her, and on April 24, 1873, it was done. Drs. Greenough, Langmaid, Anderson (of Cincinnati), Hayden, J. O. Green, Hartnett, Winslow Lewis, C. G. Putnam, C. D. Homans, Thaxter, W. G. Wheeler, Doherty, Ferguson, J. P. Reynolds, Bixby and Mr. Appleton were present. The patient was etherized and the india-rubber sheet used as before. The cyst was exposed by an incision about four inches long, midway between the umbilicus and pubes. Spencer Wells's large trocar was used, and the contents flowed well through the tube for a few minutes, but a partition wall in the cyst blocked the end, and the tube was withdrawn. Drs. Greenough and Anderson carefully kept the sides of the peritoneum in connection with the cyst wall, and no fluid ran into the peritoneal cavity. The cyst was universally adherent; the adhesions were separated easily by means of the finger, and the cyst withdrawn. The pedicle was found to be the broad ligament and too short for a clamp, consequently the cyst was tied *en masse* about two inches from its origin and cut off. The ligature used was a large carbolized one of hemp. The stump was easily kept outside of the abdomen, and the wound sewed up around the pedicle, the sutures being of carbolized hemp. Less than two drachms of blood were lost. The sponges used were perfectly new. The catheter was used every seven hours by Dr. Anderson (to whom both the patient and myself were deeply indebted), and she was fed on beef essence and brandy. At the conclusion of the operation, the pulse was 85, and the respiration good; there was slight vomiting at midnight, but it ceased and did not return. During the next day, the pulse ranged from 100 to 110, and the temperature from 100° to 100½°. On April 26th, she was reported to have passed a good night; there was no tenderness, but distention of the abdomen from gas took place; an enema of castor oil and turpentine relieved this a little. The pulse varied from 112 to 150, and the temperature from 101½° to 102¼°. At 5, P. M., one superficial and one deep suture removed. At 10, in the evening, there was threatened collapse, but recovery to her former condition took place.

April 27th.—Distention continues; she takes food, champagne, &c., well. The pulse varied from 126 to 136, and the temperature stood at 101¾°. In the afternoon, all the sutures were removed, the wound was opened behind the pedicle, and about six ounces of dark-colored fluid ran out. A very dilute solution of chloride of soda was injected through an elastic catheter and brought out several flakes of lymph. As there was considerable pain at this time, about one-sixth of a grain of morphine was injected subcutaneously. Mind wandering. At 9, P. M., a drainage tube was put in by the side of the stump of the pedicle. She gradually failed, and died at 6, A. M., April 28th, eighty-six hours after the operation.

At the autopsy, the abdominal wound was well united, except where it had been opened. The colon and stomach were greatly distended by gas. The intestines were more or less glued together by recent lymph. The uterus was of a deep-red color, and more or less covered with purulent lymph. There were about seven ounces of brownish-colored fluid in the peritoneal cavity, and there were numerous ecchymoses between the peritoneum and muscles in the anterior abdominal walls. There were no coagula, nor signs of hæmorrhage. Possibly the result of the operation would have been different, had it been performed before the patient had become so much reduced in strength.

161 *Beacon Street, Boston.*

TATOOING THE CORNEA.

By Henry W. Williams, M.D.

Read before the Boston Society for Medical Observation.

The removal of conspicuous blemishes of the cornea by a safe and nearly painless process of tatooing deserves to be regarded as one of the most valuable recent improvements in ophthalmic surgery.

Although known to the ancients from the time of Galen, it had quite fallen into oblivion; and, though not having the importance of those capital operations which preserve or restore the sight, it yet confers a great benefit upon patients by ridding them of what is often a marked or even a repulsive deformity.

The central part of the leucoma may be tinted with India-ink, to represent the pupil, and the marginal portions of the opacity with brown, blue, or other water colors, to correspond with the tint of the iris in the other, healthy eye. The ink should be rubbed up with water to the consistence of a thick paste, and may then be preserved for use, in a fluid condition, by adding glycerine.

The process of pricking in should be begun at the lower part of the space it is intended to cover. Wecker uses a spring elevator, to keep the lids separated; but this is more complained of than the operation itself, and is not necessary. It is sufficient to press the lids open with the thumb and finger, which may be covered, as suggested by Warlomont, with a bit of rag, to prevent slipping and to absorb the tears. A cataract needle, an instrument composed of several very fine sewing needles bound together and inserted into a handle, or any delicate pointed instrument, may serve for the tatooing. A little of the thick pigment being taken up on the needle and placed upon the cornea, a large number of punctures are rapidly made, through the epithelial layer only, over the surface it is proposed to color, and the pigment is then gently rubbed into the punctures with the end of the finger.

Usually there is not much sensitiveness in the parts, and it is sometimes possible to accomplish nearly as much tinting as is needed, over a considerable space, at a single sitting. In other more sensitive subjects this cannot be done, and the tatooing must be repeated, perhaps three or four times, to obtain the desired result. Generally, so much can be gained at a single performance that a patient appreciates the resulting benefit and willingly consents to a repetition of the tatooing.

If possible, the use of forceps to hold the eyeball should be dispensed with. If used, the conjunctiva should be taken hold of above the cornea, so that, in case the coloring matter should reach the punctures made by the forceps, the stain which would result may be so placed as to be concealed by being covered by the upper lid.

This operation should not be performed in cases where we find only a recent opacity of the cornea, as in many of these instances we may expect a gradual absorption of the cloudiness, especially if the patient is young. Of course it is needless to resort to this means, intended mainly for cosmetic effect, where both eyes are sightless, unless in exceptionally great deformity. But, where one eye is perfect, the removal of a blemish from the other is often a great boon to sensitive individuals, especially to ladies.

Scarcely any precautions are needed after this little operation, and it may safely be repeated in a few days, sometimes in a day or two if desirable. It may be undertaken by any physician having a delicate touch, even if quite inexperienced in eye operations. It should not be done, however, while any lingering irritation of the internal parts of the eye is present. It is especially adapted to cases of dense opacity, either partial or affecting the whole extent of the cornea. It may also be resorted to with advantage in some special conditions, where the cornea is transparent, but where it is desirable virtually to limit the area of the pupil by excluding some of the pencils of the rays of light; as, for instance, in some cases where iridectomy has been done, or in conical cornea.

SALIVATION IN IRITIS.—Dr. A. D. Williams, of St. Louis, expresses his dissent from the views of Dr. Ricord as announced at the last meeting of the British Medical Association, so far as relates to the advantages of salivation in the treatment of syphilitic iritis. The treatment of this affection, which, by the way, is self-limited, and of short duration, should be directed first to the relief of the acute inflammation of the iris, and afterwards to prevent the bad consequences which result from this inflammation, viz., the adhesions which form between the pupillary margin of the iris and the crystalline lens. These synechiæ always interfere materially with vision, and leave the eye in a state of tension, which is liable to excite repeated attacks of the inflammation. Mercury is, of course, to be recommended in this affection, with the view of counteracting the syphilitic poison in the system, but the local treatment is, after all, the most important. This consists in the *energetic* use of atropine in the eye, so as to dilate the pupil to the fullest extent, combined in severe cases with the application of leeches.—*Medical Archives*, March, 1873.

Progress in Medicine.

REPORT ON MEDICAL CHEMISTRY.*

By Edward S. Wood, M.D.

A new Reagent for the Detection of Blood Pigment.—Prof. F. L. Sonnenschein (*Vierteljahrsch. f. gericht. und öffent. Med.*, 1872, No. 4) recommends a saturated solution of sodic tungstate, which has been previously acidulated with acetic acid, as a reagent for the precipitation of hæmoglobin from solutions which contain it. This reagent forms, with all of the protein compounds, a precipitate, which is insoluble in dilute acids, but readily soluble in alkaline fluids, and is more delicate than "Millon's reagent" (nitrate of mercury), which is generally used for the detection of small amounts of these compounds.

It gives, with a very dilute solution of blood, a reddish-brown or chocolate-colored precipitate, which is bulky at first, but collects together upon being boiled into a small volume. This precipitate is soluble in ammonia water, to form a solution of the same color as the solution of a corresponding amount of blood in ammonia, and can be re-precipitated by the addition of an acid.

The chief value of this reagent is, that it appears to precipitate the hæmoglobin as such, without first decomposing it into hæmatin and globulin, and, also, that it precipitates this pigment from very dilute solutions, so that we are enabled by its means to obtain a concentrated from a very dilute solution. Moreover, since the precipitate produced is a stable compound, and admits of being dried, we can preserve a given specimen of blood coloring matter for any desired length of time.

Sodic molybdate acts in precisely the same manner as sodic tungstate.

The Condition of the Alkaline Earths and Phosphoric Acid when dissolved in the Blood.—From the experiments of A. P. Fokker (*Pflüger's Archiv*, Nos. 4 and 5, 1873), it appears probable that it is in combination with albumen that calcic phosphate exists in the blood, since he was enabled to obtain such a combination artificially which gave the same reactions as the blood serum.

In the first place, he prepared compounds of the calcic and magnesic oxides with albumen, by dusting over the surface of some filtered egg albumen a little slaked lime or oxide of magnesium, these compounds corresponding to the alkali albuminates formed by the action of the hydrates of sodium or potassium upon albumen.

The calcium albuminate is soluble in water, the solution having an alkaline reaction, and becoming turbid if exposed to the air, owing to the absorption of carbonic acid and deposition of calcic carbonate. The aqueous solution is not coagulated by boiling, but is decomposed by the addition of sodic or potassic hydrates, these reagents forming the sodic or potassic albuminates and calcic hydrate which is precipitated if the solution is sufficiently concentrated. Calcic albuminate is insoluble in dilute hydrochloric or nitric acids, soluble with difficulty in acetic acid, but readily soluble in phosphoric acid, with the evolution of sulphuretted hydrogen. This phosphoric acid solution is also decomposed by potassic hydrate, potassic albuminate and calcic phosphate being the products of the decomposition. If sodic phosphate be added to calcic albuminate, a precipitate of calcic phosphate takes place, but this is explained by the fact that a part of the phosphoric acid of the reagent unites with the albuminate, and the free alkali thus formed acts as usual to form the sodic albuminate and calcic phosphate; this change, however, can be prevented by the previous addition of a little acid to neutralize the alkali as it is formed, and no precipitate takes place when a solution of the albuminate is acidulated with phosphoric acid and then neutralized with sodic carbonate. Carbonic acid gas, passed through a solution of the albuminate, causes a precipitate of calcic carbonate, which an excess of the gas re-dissolves, as in the case of the ordinary calcium salts; and if to a solution thus treated sodic carbonate and sodic phosphate be added, no precipitation takes place, even upon boiling, thus showing conclusively that the calcium is not in combination with the carbonic acid or the phosphoric acid alone, for the excess of carbonic acid (which could hold the carbonate in solution) would be expelled by boiling, and the phosphate is insoluble in alkaline solutions. Oxalic acid or ammonic oxalate precipitate from an aqueous solution of the albuminate calcic oxalate and the whole or a part of the albumen.

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* Second semi-annual Report.

The magnesium albuminate has nearly the same properties as the calcium compound.

Test for Sulpho-cyanides in Saliva.—(Fres. Zeit., 1872, No. 3, from *Archiv der Phar.*, Bd. 198.) R. Böttger recommends the use of guaiac paper. This paper is made by moistening a strip of filter paper with tincture of guaiacum, drying it, and then passing it through a dilute solution of sulphate of copper (1 : 2000). A blue color is instantly produced by moistening paper so prepared with saliva.

Test for Cholesterin by Means of Sulphuric Acid and Chloroform.—E. Salkowski. (*Fres. Zeit.*, 1872, No. 4.)—This delicate test for cholesterin is performed in the following way. Dissolve a few crystals of the cholesterin in chloroform, add an equal volume of strong sulphuric acid, and shake the mixture. The chloroform becomes quickly colored blood red, then cherry red or purple, which color is permanent for several days. At the same time, the sulphuric acid shows a strong green fluorescence. If the red chloroform solution be poured into an evaporating dish, or into a test tube which contains the slightest trace of moisture, it quickly changes to a blue, then to a green, and, finally, to a yellow color; but if the test tube be perfectly dry, the red color is retained. The red or purple color can be restored to the decolorized chloroform by shaking again with sulphuric acid. The addition of alcohol, ether, or even fresh chloroform, to the red solution will deprive it of its color. Glacial acetic acid causes the color to change to a blue.

Recognition of the Biliary Pigments by means of the Spectroscope.—B. J. Stockvis. (*Fres. Zeit.*, 1872, No. 4, from *Ber. d. deutsch. chem. Gesell.*, v., p. 583)—If urine, which contains biliary pigments, be treated with a little zinc chloride and then ammonic hydrate in excess, it assumes, after being filtered or shaken with air, a brownish green color, and if this fluid be subjected to the action of the spectroscope, three distinct absorption bands are visible. One is a dark and well-defined band in the red, between the Fraunhofer lines C and D, beginning at C and ending near D. The second is at the junction of the orange and yellow, between the lines D and E, beginning near D, and is narrower and more clearly defined than the first. The third is a small and not well defined band, and also lies between D and E, but near E; this band is not peculiar to jaundiced urine, as the first two are. If the urine contains but a very small amount of pigment, it must be precipitated with acetate of lead, filtered, and the precipitate decomposed by an alcoholic solution of oxalic acid. The resulting fluid, after the addition of zinc chloride and ammonic hydrate, shows the above absorption bands, if placed before the slit of the spectroscope.

The substance, which gives rise to these absorption bands, is one of the oxidation products of bilirubin, termed by the author choloverdin, neutral solutions of which fluoresce into red; but of the alkaline solutions, only the ammoniacal fluoresce. It is soluble in alcohol, ether, chloroform and amyl alcohol, the last three solvents not being capable of removing it from alkaline solutions. All solutions which contain choloverdin, also contain another substance, described as a reducible substance, which is present in all fluids containing any of the oxidation products of the biliary pigments, even if the fluid has been acted upon by nitric acid. If reduced by sulphide of ammonium or sugar, an absorption band appears between D and E. This substance is soluble in water and alcohol, less so in ether and chloroform, and is very stable in acid solutions, but not at all so in alkaline fluids.

The chief value of this test is, that it permits the recognition of the biliary pigments in fluids when the normal pigments, bilirubin, &c., have been so changed by oxidation that they are no longer recognizable by the ordinary Gmelin's test.

Detection of the Biliary Acids in Normal Urine.—Prof. Vogel gives the following simple process for the detection of the biliary acids in normal urine. (*Fres. Zeit.*, 1872, No. 4, from *Tagebl. der* 45, *Versamml. deutsch. Naturf. u. Aerzte in Leipzig*, No. 5, p. 75.) Four or five ounces of the urine should be acidulated with a few drops of hydrochloric acid, and shaken for at least on hour with chloroform. The chloroform, which has become brown and turbid, can be separated from the urine by decantation, or with a pipette, and rendered clear by shaking with six or eight centimetres of absolute alcohol. This mixture is then to be filtered, and the chloroform separated from the alcohol by means of a pipette, and allowed to evaporate on a watch glass. If this residue, which has a bitter taste, be treated with sugar and concentrated sulphuric acid, a violet color is produced, first around the grains of sugar; this color becomes changed to a brown in fifteen to thirty minutes. (Pettenkofer's test.)

In this manner, Vogel found a small amount of the biliary acids in the urine of eight healthy individuals, and also in that of persons suffering from various diseases. In fact, no specimen examined failed to give the reaction for the biliary acids, when treated in this manner; and the color was more strongly marked in the urine of patients with disease of the liver. (Three cases of catarrhal icterus, one of carcinoma of the liver, and one of cirrhosis.)

In order to be sure that this reaction was not caused by other substances, which may give a somewhat similar color with sugar and sulphuric acid (such as albumen, muscular fibre, various resins and oils, phenol, &c.). Dragendorff evaporated a litre of the urine of ten healthy individuals, varying in age from 8 to 55 years, extracted the residue several times with alcohol, evaporated this, and dissolved again in water. This solution was precipitated with acetate of lead, dissolved in alcohol, and decomposed with sodic carbonate, carbonate of lead and glycocholate of sodium, being the products of the decomposition, the latter remaining dissolved in the alcohol. From this solution the glycocholic acid was isolated, and its identity confirmed by Pettenkofer's test.

Not satisfied with this result, Dragendorff, by working with a large amount of urine (100 litres) in the above way, succeeded in obtaining a sufficient quantity of the acid to enable him to purify it by re-crystallization and make an ultimate analysis of it, thereby proving beyond a doubt that the substance which thus reacts with Pettenkofer's test in normal urine is composed of the biliary acids, and that these do, under normal circumstances, find their way into the general circulation in small amounts, and are partially eliminated by the kidneys.

Separation of Carbolic Acid from Urine.—E. SALKOWSKI. (*Fres. Zeitsch.*, No. 3, 1873, from *Archiv d. Physiol.*, Bd. v., p. 353.)—The urine is made strongly acid with tartaric acid, and distilled until about one half of the liquid has passed over. The distillate should then be shaken twice with ether, the ether decanted, and allowed to evaporate. The residue can then be treated with a little water, filtered if necessary, and Lex's test (see below) applied.

In 200 cc. of normal urine, no carbolic acid can be detected, but if 0·1 grm. be added (= 1 part in 2000), an intense blue coloration is produced, and this color can be perceived when the urine contains only one part in 4000.

Lex's test for carbolic acid is performed with ammonic hydrate and calcic hypochlorite (chloride of lime). To the suspected fluid is added about one fourth of its volume of ammonia water, and then a few drops of a saturated solution of hypochlorite, and the mixture gently warmed to boiling. If much carbolic acid is present, a blue color appears immediately; but if only a minute amount, it does not appear until about fifteen minutes have elapsed. Too much calcic hypochlorite, or a too rapid application of heat, prevents the reaction. The fluid which has once turned blue may become colorless by standing; but the color can be restored by the addition of a few more drops of the hypochlorite. If the fluid is acidulated with sulphuric or hydrochloric acids, the blue changes to a red color.

Quantitative Determination of Uric Acid in Diabetic Urine. E. KULZ. (*Fres. Zeitsch.*, 1872, No. 3.)—For this purpose a large amount of the urine should be used (the whole amount passed in twenty-four hours), placed as soon as passed in a cool place, and one or two cubic centimetres of a solution of creasote added, in order to prevent fermentation from taking place. When the whole amount for twenty-four hours is collected, 1000 cc. (2·1135 pints) should be filtered off, precipitated by the addition of 80 cc. of a solution of acetate of lead, and 540 cc. of this mixture (corresponding to 500 cc. of urine) quickly filtered off. To this 540 cc. should be added a concentrated solution of mercuric acetate, until no further precipitation is produced. After being allowed to stand for twelve hours, this precipitate should be collected upon a filter paper, thoroughly washed, and finally decomposed by sulphuretted hydrogen in a flask, into which both filter and precipitate have been introduced together. The mercuric sulphide thus obtained must be thoroughly freed from uric acid by boiling several times with water which contains a little sodic carbonate, filtering, and the uric acid precipitated from the filtrate by hydrochloric acid. It can then be dried and weighed in the ordinary manner.

Test for Grape Sugar.—Campani recommends (in *Fres. Zeitsch.*, 1872, No. 3, from *Arch. d. Pharm.*, Bd. 198) the use of a saturated solution of basic acetate of lead, mixed with a little dilute solution of acetate of copper. To about 5 cc. of this solution is added a little of the suspected fluid (urine, for instance), and the mixture boiled. If sugar is present, a yellow color is produced, and a yellow precipitate settles after a while. This change takes place if only $\frac{1}{100}$ per cent. of sugar is present. If more than one per cent. is present, the color of the solution and precipitate is orange red.

A new kind of Urinary Calculus in Oxen.—Dr. Giorgio Roster describes, in the *Ann. d. Chem. u. Pharm.* (Bd. clxv. i., p. 104), a calculus occasionally seen evacuated with the urine of the oxen in the neighborhood of a town in Tuscany. The largest of several received by him weighed 1·02 grm. (15·7 gr.), and the smallest 0·15 grm. (2·3 gr.). These concretions were light, readily floating on water, of a straw-yellow color, or often with a greyish tinge, and easily reduced to powder in a mortar, although too hard to be crushed between the fingers. The powder, examined under the microscope, was seen to consist of transparent prismatic crystals, resembling those of hippuric acid, very soluble in boiling water, but separating from it in crystals upon cooling. These crystals are insoluble in alcohol and ether, and, when heated on platinum foil, first melt and then char, with the evolution of an odor resembling burnt sugar. The ash, which is left, consists of pure oxide of magnesium. Upon analysis, these crystals were found to be the magnesium salt of a new organic acid, called by Dr. Roster lithuric acid, or lithurate of magnesium.

Prussic Acid Tests in Chemico-legal Investigations.—According to the experiments of Almen (*Fres. Zeitsch.*, 1872, No. 3, from *N. Jahr. d. Phar.*, B. 36, p. 226) and H. Struve (*Fres. Zeitsch.*, 1873, No. 1, p. 14), by far the most delicate test for prussic acid is the blue color which it produces, when in contact with Schönbein's test paper. (For the preparation of which, vide test for the sulpho-cyanides in saliva, p. 7.) But since the same reaction may be produced by a large number of other substances, as nitric, nitrous and hydrochloric acids, chlorine, bromine, iodine, ammonia, dilute sulphuric acid, chromic acid, potassic bichromate, and many other substances, this test cannot be relied upon as a final test, but is chiefly valuable as a preliminary test. The paper should be exposed to the fumes arising from a mixture supposed to contain prussic acid, air being drawn through the mixture by means of an aspirator. In this manner, it was possible to detect $\frac{1}{1000}$ grain in seven ounces of urine, which corresponds to a dilution of one part in three million, and, according to Preyer, this test will detect one part in twelve million. This test involves no loss of substance, and distinguishes certainly between the volatile prussic acid or its salts (which are decomposed by carbonic acid at the ordinary temperature of the atmosphere) and the ferro-, ferri- and sulpho-cyanides, all of which contain cyanogen, but are not volatile or decomposed at the ordinary temperature. If the presence of prussic acid is rendered probable by this preliminary test, a portion of the substance should be distilled, in order to isolate the prussic acid from the organic matter, and the distillate tested in the ordinary ways by the silver, iron and sulphur tests.

A modification of the most delicate of these (the sulphur test) is strongly recommended by both Almén and Struve, as follows. The distillate, after the addition of ammonic sulphide to form the sulpho-cyanide of ammonium, should not be evaporated to dryness at once, because this sulpho-cyanide is volatile to a considerable extent at the temperature of 212° F., and may easily be lost if only a small amount be present. A few drops of sodic or potassic hydrate should be added previous to the evaporation, in order to form the sulphocyanide of sodium or potassium, which are not volatile at this temperature. Then evaporate nearly or quite to dryness, add a few drops of water, acidulate with hydrochloric acid, and, finally, add a drop or two of ferric chloride, when the characteristic blood-red sulpho-cyanide of iron will be formed.

Poisoning by Alum.—A fatal case of poisoning by the ordinary potassium alum is reported in full by Dr. Hiequet *(Ann. d'Hygiéne*, Jan., 1873), with the chemical analysis of the tissues and remarks upon the toxicology of alum. It was caused by the accidental ingestion of about an ounce instead of Epsom salts. The symptoms and lesions produced were those of a corrosive acid poison, there being found destruction of the epithelium in the mouth, throat, œsophagus and stomach, two gangrenous patches in the small intestine, and also extensive peritonitis.

This is the only fatal case fully reported, although another is mentioned by Taylor, without any details of the case, and a non-fatal case is reported by Orfila, who, in his report, gives, as the result of his experiments and observations, the following conclusions among others :—that, when taken in large doses, death may be caused by alum in man, if vomiting and purging do not take place ; and that it acts much more severely upon persons afflicted with chronic gastric disease than upon others. Both of these conditions existed in the patient whose case is reported.

(To be concluded.)

The Hospitals.

BOSTON DISPENSARY FOR DISEASES OF THE NERVOUS SYSTEM.

Report of 211 Cases, by D. F. Lincoln, M.D., Physician in charge.

This institution was opened in May, 1872, and the present report is based upon the cases received within the first thirteen months, seven very recent ones being omitted. A few, not strictly proper subjects for treatment by the Dispensary, were received for special reasons; they are noted in the last few lines of the table.

The number of curable cases which left before any benefit could possibly be gained, is much to be regretted, especially in those instances where neglect must involve the crippling for life of a young child affected with paralysis. It will be noticed that in some of the selected cases described below, no account of treatment is given; such are cases where the patient came only once or twice.

	Relieved.	Not relieved.	Left.
Myalgia,	18	—	1
Muscular atrophy,	—	—	4
Rheumatism,	3	2	—
Congestion of cord,	1	—	1
Congestion of plexuses, &c.,	3	—	—
Neuralgia,	6	—	3
Hemicrania,	1	—	—
Hemidrosis,	—	—	1
Anæsthesia cutanea,	2	—	—
Impotence,	—	—	2
Incontinence of urine,	—	—	1
Hemiplegia, R.	1	—	3
" L.	4	—	3
Paraplegia,	—	—	1
Aphasia,	—	—	1
Infantile paralysis,	—	—	3
Myelitis,	1	1	—
Locomotor ataxia,	—	2	—
Peripheral paralysis,	5	1	2
Post-variolar paresis,	1	—	—
Epilepsy,	5	—	3
Chorea,	—	—	1
Paralysis agitans,	—	3	2
Tremor and spasm of fingers,	1	—	3
Spasm of thigh,	1	—	—
Torticollis,	—	1	—
Asthenia,	22	1	24
Mental derangements,	2	—	3
Vertigo,	2	2	1
Insomnia,	3	—	—
Palpitation,	—	1	1
Deafness,	1	—	1
Dyspepsia,	—	—	3
Saturnism,	3	1	1
Alcoholism,	—	—	2
Injury to joint and other surgical lesions,	4	—	6
Leucorrhœa, eczema, bronchitis,	4	—	1
	94	15	78

To these add seven very recent cases, and eighteen referred to other ambulances, making a total of 211.

AFFECTIONS OF THE MUSCULAR SYSTEM.

Myalgia, strictly so called, is almost invariably relieved, or cured, by one or a few applications of the *faradic* current. The table includes, under this heading, perhaps rather loosely, a few cases of pain and weakness due to strain of muscles or aponeuroses, and to Colles's fracture. The following account is somewhat remarkable:—

Case 1.—W. W., gardener, æt. 57. Has been treated nine years for muscular rheumatism, contracted through exposure to the weather while in the U. S. Army. For two months past, has been unable to work. The anterior border of the left cucullaris, near its middle, is the seat of severe pain, which is excited, first, whenever he makes the motion of putting his coat on; second, when he flexes the forearm; third, when a portion of the inner aspect of the biceps is touched, which was the original seat of his pain. A *galvanic* current was applied as follows:—From biceps to hand, xxx. cells, five minutes; from edge of trapezius to hand, xx., five minutes; from spinal attachment of trapezius to hand, xx., three minutes. Immediately afterwards, he could execute all the movements of the hand and arm without pain, whereas, when he came in, he could scarcely move those parts at all. He came again in a week, and the cure seemed to be permanent.

In a certain number of cases, congestion of the roots of spinal nerves, or of the plexuses, may be assumed to be present. The spine, or a plexus, may be tender; there is much pain, weakness, numbness and formication in the affected limb. Two such cases, originating in the concussion of violent falls, have been greatly benefited by the use of both orders of the current; one of these is here subjoined.

Case 2.—T. W. B., tailor, 39. May 11, 1873. Fell on the ice last February, striking back of head and shoulders, and remaining insensible for some minutes; on coming to, he did not regain the power of moving his limbs for twenty minutes. Has done very little work since; every attempt has brought on pains, tingling sensations, and debility, specially in the muscles used in sewing, but also in the other limbs. Shooting thrills of "numbness," and sometimes of heat, through limbs.

S. P.—Great debility is shown in his gait, and the grip of his left hand is weak. Totters slightly when eyes are shut. Senses:—Touch in left leg diminished; left hand (finger pulps), *one inch*; right, normal. Pain, tickling, heat, normal. Occasional chilliness in limbs and, when he rises from a stooping posture, slight shooting pains in the thighs. Much lameness in shoulders; tenderness of cervical vertebræ. No motor paralysis, no ataxia and no girdle sensation. Galvanism to spine and cervical plexus and limbs.

May 18th.—Tactile sense, *left* hand, one-third and one-quarter inch; *right*, one quarter inch.

May 28th.—Reduced still further, viz.: to one-sixth and one-fifth respectively.

The muscles of the neck and shoulder were faradized a few times with much benefit. Discharged in July, tolerably well, but rather feeble.

PROGRESSIVE MUSCULAR ATROPHY.

Case 3.—W. M., clerk, æt. 35. His legs are very feeble, and greatly wasted; he can walk only ten minutes at a time. The arms are much less badly wasted; the interosseous muscles and the balls of the thumbs are pretty well nourished. The faradic current acts upon all these muscles with a force proportionate to their apparent bulk. The disease commenced a year ago, when he suffered much from pains in his legs for a time; he frequently has pains in his feet when he stands too long, as is required by his occupation. Networks of fine cutaneous bloodvessels are seen above the ankles. He never suffered from cramps, formication, or anæsthesia. It is worthy of remark, that he suffers much from somnolence and low spirits; he is very easily moved to weep. There is no ataxia. He did not return for treatment.

HEMIPLEGIA.

Case 4.—J. W., æt. 2 years, 3 months. Was a very healthy child till the attack. Six months ago he was suddenly seized at eleven in the night, with vomiting and high fever. Next morning "he could stand, and I think he had the use of his hands; he took the drink out of my hand." At noon, he was found by his mother lying in a chair, looking as if he were dying, with a pale face, eyeballs rolled up, "low" pulse, feeble consciousness, convulsive movements of right hand and leg. This condition of things lasted for at least a day and a night. When he got a little better, his hand and leg were quite useless; it was a month before he could crawl, and a month longer before he could walk. No further gain was made after these two months. At present he halts a little in running, his hand is quite feeble, and the arm is decidedly emaciated. Reaction to the faradic current, good. His mother did not bring him again.

LOCOMOTOR ATAXIA.

Cases 5 and 6.—Catharine L., æt. 18, and Jeremiah L., æt. 14, are remarkable, as instances of locomotor ataxia occurring in a brother and sister. The rest of their family are stated to have been perfectly healthy persons. The cause assigned by the relatives is bathing in salt water, in which both children indulged themselves to great excess, eight years ago; it appears, however, that the girl had already begun to suffer from tremor and awkwardness in the use of her hands, many months before she bathed at all; the boy began to experience a difficulty in walking, after two or three months of bathing. Their gait is thoroughly ataxic; they stoop forward and carefully fix their eyes on the floor in front of them; can walk a mile at the furthest. When their eyes are closed they are unable to stand. Motions of the arms and legs, which they perform with tolerable accuracy while their eyes are open, or by daylight, fail, or are very badly done, if they are prevented from seeing. There is a good deal of muscular force in all the limbs; it is quite hard to flex or extend the legs of the boy, while he is making resistance, although when he walks, he presents a very picture of feebleness. So much is said, to justify the application of the term "locomotor ataxia." But it should be added that the remainder of the group of symptoms, commonly observed in this disease, is less strongly developed. No "lightning pains" have been felt. The boy reads type at the normal distance; the girl at half the normal distance. There is no diplopia; no strabismus; no failure of the muscles of the eye; the pupils are not dilated. Sensations of numbness or formication are absent. The girl "can feel when there is a wrinkle in her stocking," and can put her finger upon the thick sole of her shoe, pretty nearly at the spot where I tap it with a pencil; the boy feels the touch of two points, at a distance of two inches on the naked sole. On the fingers, tactile sensation is weakened, the points being felt only at one-third or one-half of an inch asunder. Pricking and tickling are plainly felt; the reflex jerking of the leg is normal in the girl, but violent in the boy. It is almost impossible to make the muscles of the legs contract, by the application of faradic stimulus to the peroneal nerves; this condition is more marked in the girl's case. The functions of the bladder and intestine are unimpaired. The arm muscles respond properly to the current, although the grasp of the hand is decidedly weak, perhaps one-half as strong as it should be. The boy is little emaciated; the girl is quite meagre, and has lateral curvature of the spine. Both are intelligent; their speech is hesitating, but distinctly articulated, suggesting a possible weakness and irregularity of the expulsive action of the chest, but not paralysis of any vocal organ. When the girl talks, her face moves in an exaggerated grimacing manner, which reminds one of the involuntary exaggeration of the motions of the legs in walking. The inference is readily drawn, that the posterior spinal roots are but slightly and secondarily affected, and that the disease is not of the "ascending" type. As respects the abolition of the faradic reaction, this is certainly an unusual symptom, and very curious when taken in connection with the retention of voluntary muscular power. To produce the galvanic reaction in the peroneal nerve, twenty-five and thirty cells were required, ten of which were sufficient in the case of a healthy man. For the girl, a rather weaker current sufficed. The flexors of the heel, although their reaction is very poor, preponderate slightly, giving to the feet the position of a talipes equinus, which is easily reducible. The boy is the worse of the two in this, and in most other respects. It remains to be said that a dozen applications of the galvanic treatment entirely failed to relieve these patients. Both have grown worse within a year.

EPILEPSY.

The following cases have interest on account of their apparent causation.

Case 7.—C. A. J., shoemaker, æt. 20. General health, fair. "No relation of his ever had fits." Practised self-abuse for the first time in October, 1871—about five times in all; the epileptic attacks commenced in November, and have occurred once or twice a week ever since, except during one month, when he was taking bromide of potassium; they last twenty minutes, and are not preceded by a warning; total loss of consciousness. Came only twice.

Case 8.—Anna M., type-sorter, æt. 19. Says there are many cases of lead-colic in the type foundry where she is employed. The strength of both hands is much impaired, but the wrists do not droop. The hands, feet and eyelids tremble. Great pallor of face, tongue and hands. Two years ago she had three fits, in which she lost consciousness; at present she has a dizzy turn almost every day, without warning; she sometimes falls, but does not lose consciousness.

ASTHENIA.

With very few exceptions, the patients classed under this head came "to be cured of their nervousness;" by which term may be understood a combination of muscular weakness, want of endurance, loss of mental vigor, general tremor, excitability of temper, and mental depression. The prominent causes, in forty-four cases, appeared to be the following, viz.: Abuse of liquor, tobacco, tea and coffee, and opium, or chloral, 10; self-abuse, 17; overwork and low diet, 11; childbearing, 4; overwork in school, 1; sunstroke, 1. The following are instances of concurrent causation:

Case 9.—P. S., laborer, æt. 30. In his own words—he "gets all of a tremble" when anybody speaks to him; is easily angered. "When anybody speaks quick and sharp to me, I fills all up inside, so I can't answer him; I gets a kind of choking; I turns red in the face, and I has to put down whatever I has in my hand." Has practised self-abuse for ten years, two or three times a week; says he left it off three months ago; no local derangement. Uses four ounces per week of the strongest tobacco, for chewing and smoking; but little spirit. By reducing his allowance of tobacco to one-fourth, and taking a pill of oxyd of zinc (gr. ij.) thrice a day, he recovered almost wholly in the course of a week; professed himself well, and did not come again.

Case 10.—L. K., slater, æt. 29. Excesses in drink, venery and the use of tobacco. Stands unsteadily; hands tremble when he tries to close them tightly; palpitations at night; talking in his sleep; depression of spirits. Gave up his tobacco for the most part; took 50 grains of bromide of potassium daily, and made great and rapid improvement.

In several cases galvanism was applied to the spinal cord; it acted in its usual manner, often producing an immediate sense of relief and invigoration which lasted for a day or two. Protracted applications (lasting fifteen or twenty minutes) have been made by way of experiment; as far as tried, the experiment appears fully justified by results.

Galvanization of the head is known to be capable of relieving local distress of various sorts, of which the following may serve as specimens:—

Case 11.—M. O'D., student, æt. 17. Has been a year in his seminary. Three months ago, began to suffer from headache, and a wearing pain in his eyes; the lines of the printed page ran together when he looked at them; he had to give up study. He cannot read fifteen minutes, at present, without a painful oppression over the brows. A tolerably strong galvanic current was passed from his forehead to one hand during three and one-half minutes. After this, he felt "a lightness" in his head, which in the course of twenty minutes gave place to a sense of relief from the oppression and tension. The routine of his seminary is as follows: Sleep and toilet, 9 hours; religious exercises, 1 hour; meals, 1 hour, 10 minutes; recreation, 2 hours; study and recitation, 10 hours, 50 minutes. No gymnastics. Half-holiday once or twice a week.

Case 12.—C. B., bar-tender, æt. 37. Drinks very little; appears sober. Over-work, irregular sleep, wet feet, for three months past. Of late, his head has felt heavy and hot, and has ached severely. Five days ago (i. e., August 23, 1872), his face was suddenly paralyzed on the left side, while the right became numb, and the right hand and right half of the face were much swollen. This happened on the evening of a most fatiguing day's work. The paralysis had greatly improved when I saw him. A current from five and seven cells was passed during two and one-half minutes, from the forehead to the back of the neck; immediately after which he was freed from a severe pressing headache in the brows and occiput. The relief lasted three days. Twelve more applications, in various methods, were made, with *immediate* sensible relief in almost every case; various tonics were also given; and eight months later he returned, saying he was quite well of his former trouble.

MENTAL DEPRESSION.

Case 13.—Mrs. A., æt. 32. Has suffered two months from depression of spirits, disturbed sleep, bad dreams, fits of crying, and a tendency to imagine that people are saying things to harm her. A year ago she was affected in the same way for two months. She talks like a perfectly sensible woman, understands the true nature of her symptoms, and must be considered quite sane. Is six months pregnant, anæmic and constipated. Tincture of iron and laxatives were employed for two weeks, without relief to the mental distress. Inhalation of nitrite of amyl—three drops, once or twice a day—was then commenced, and at the end of two weeks she was quite freed from her low spirits.

The case is mentioned, as recalling similar experiments made by Meynert upon cases of *developed* melancholia in the Vienna Asylum. Compare also the less positive results in seven cases of mania, melancholia and dementia, treated by the inhalation of nitrous oxyd; by Samuel Mitchell, M.D., in the first volume of West Riding Lunatic Hospital Reports.

It is proper here to express thanks to those whose liberal contributions have sustained the Dispensary. To those whose professional assistance has been freely rendered on its behalf, thanks are also due; among these may be mentioned Dr. E. T. Williams, Assistant Physician; Dr. O. F. Wadsworth, Ophthalmologist; and Messrs. Dunn and Dennett, of the medical school.

8 Beacon Street, Boston.

Report your Cases.—Every intelligent member of the profession should feel personally bound to contribute to its advancement. In this direction the following remarks, from Dr. Tilt's Address before the Obstetrical Society of London, are in point, and should be heeded:—

"Every now and then there crop up in everybody's practice 'representative' cases—cases which well illustrate a mode of treatment, or confirm some theory, or show the fallacy of another. These are the cases we want, and there can be no excuse for not recording them; for although many of you are too busy to write papers, all can carefully note down the particulars of a case, and we ought all of us to bring ourselves to feel it as a crime to let a little trouble interfere with the careful recording of an important case. If we [this Society] did nothing in the course of each year but to well sift a considerable number of such cases, and to issue them, stamped, as it were, with the seal of authority, we should be laboring most efficiently toward the intelligent reconstruction of medicine; for its imperfection undeniably depends on the deplorable inaccuracy with which cases are collected, if one can call cases the shreds and tatters of half-ascertained facts that we so often meet with in medical works."

Bibliographical Notices.

First Annual Report of the Dispensary for Skin Diseases. Boston. 1873.

A few weeks ago, we called attention to the report of Dr. Duhring's dispensary for skin diseases in Philadelphia. The publication of the first annual report of Dr. Wigglesworth's dispensary in this city affords the opportunity for an interesting comparison in respect to the occurrence and care of this class of affections in the two cities, which has been made in part only in the report under notice. At the time the former was opened, we believe there was no provision made for their special care in Philadelphia, neither hospital nor dispensary accommodation, so there seems to have been a real necessity for its creation; yet the number of patients for the first year was but 425, and during the second year 421. In our own city, when Dr. Wigglesworth opened his dispensary, there were already, well-established and in active operation, two special dispensaries for the treatment of skin diseases; the one in connection with the out-patient department of the City Hospital, the other at the Massachusetts General Hospital. All three are organized and conducted on the same plan, viz.: "the gratuitous medical treatment of the poor affected with diseases of the skin, and the advancement of the science of medicine as far as regards such diseases. Patients who are able, purchase their own medicines; those who are unable to do so, are supplied gratuitously." Dr. Wigglesworth's report shows the number of patients during his first year to have been 823; the number at the skin Department of the City Hospital during the year covered by its last annual report was 952; while at the Massachusetts General Hospital the number of cases (exclusive of several classes of cutaneous affections there treated in the surgical out-patient department) during the past year was 735. Thus against 2,510 cases of disease of the skin treated in Boston in special dispensaries and by specialists in dermatology, Philadelphia can show but 421 cases. This certainly demonstrates the superior advantages offered by Boston as a school for clinical instruction in this department. Moreover, were the same means used to announce to the public and to the medical profession the existence and objects of the two hospital dispensaries as have been employed to establish the private one, there is no doubt that this number might be largely increased.

The report states the intention of providing, at some future time, a hospital in connection with the dispensary, for the treatment of the more serious cases. There can be no question of the necessity of some provision for special hospital accommodation for these diseases. Upon this question, Dr. Duhring, in his report, remarks as follows:—

"Where patients are so seriously affected with obstinate and chronic diseases, but little good is to be expected from a mere dispensary treatment. For example, the patient applies for medical advice, perhaps once or twice a week, and, returning to his poverty-stricken home, finds that it is an utter impossibility for him to carry out the instructions which he has received from the physician. The various conveniences of a hospital are unknown to the small and crowded rooms of the poor, and hence it is not difficult to understand why treatment, under such circumstances, is so often unsatisfactory. Place these same cases in a well-appointed hospital, with the requisite care and attention which their trouble demands, and they will recover in one-half the time. That all diseases of the skin can be satisfactorily treated upon the so-called dispensary plan is an error; all can be relieved, and very many entirely restored to health, but there are forms of disease continually encountered where hospital accommodation, with competent nurses, alone can effect the desired result. It is for these sufferers that we need a temporary home, where the care so essential for their recovery may be obtained.

"Singular as the statement may seem, there is not a ward or bed among all the hospitals of Philadelphia (excepting the Almshouse), devoted to the treatment of skin disease—in fact, no institution where a poor man may apply and be sure of admission. At some of our hospitals, it is true, grave cases of cutaneous disease are now and then admitted, if there happen to be spare room; but, as a rule, such admission only occurs through some influence with the physicians in charge."

This statement, founded on the experience of an accomplished dermatologist, is literally true of Boston. That some provision should be made in our large and so-called general hospitals for the special treatment of skin diseases, would seem to be a necessity so clear that a plea for its establishment should be entirely unneeded. If those controlling such large charities do not recognize such a necessity, they discriminate between classes of the sick equally deserving, offering to one class the best trained skill for its relief, and refusing it to the other. The interests of humanity and medical education both urge the importance of a claim recognized by nearly all other cities in the civilized world.

The most noticeable features in the character of the patients and the nature of the diseases mentioned in the report are the very small proportion of children (but 71) and the almost entire absence of those affections which are generally found so difficult to cure and which form so large a class of those who generally resort to such dispensaries, as shown by the following results of treatment. Discharged, well, 499; still under treatment, 32; lost sight of, 292. "The latter class belonged, almost without exception, to the lighter forms of disease. It may safely be presumed that these patients were satisfied with the results of treatment; for it is well known that dispensary patients, when cured, rarely trouble themselves to report the fact. The cases still under treatment are also light cases, none of them belonging to the so-called 'chronic incurables.'"

The dispensary has made a very successful beginning.

A Treatise on the Principles and Practice of Medicine; designed for the use of Practitioners and Students of Medicine. By Austin Flint, M.D., Professor of the Principles and Practice of Medicine in Bellevue Hospital Medical College. Fourth Edition, carefully revised. Philadelphia: Henry C. Lea. 1873. 8vo. Pp. 1070.

In the present edition, this valuable work has been thoroughly revised, in parts re-written, and enlarged by the addition of new matter, causing an increase in the text of about seventy pages, which by no means, however, indicates the amount of new material, a good deal of the old having been necessarily omitted in consequence of the progress of medical science during the past five years. The additions and changes will be found scattered throughout the work, but especially in the section devoted to the Diseases of the Nervous System, which is an admirable summary of the present state of knowlege on this subject, so far as it is of importance to the medical practitioner. We notice particularly, among the additions in this department, an account of Pachy-meningitis and Sclerosis of the brain ; and the chapters on Paraplegia, Locomotor Ataxia, Wasting Palsy and other subjects are enlarged and brought down to the present time.

As a condensed text book and work of reference on the subject of the Practice of Medicine, we are acquainted with nothing in the English language which will compare with it in accuracy and completeness ; and no medical practitioner should be without it.

The American Chemist. A Monthly Journal of Theoretical, Analytical and Technical Chemistry. Philadelphia. 1873. Vol. III. No. 11.

The May number of this journal, received, contains, in addition to the usual class of articles (see this JOURNAL, May 1st, p. 453) two abstracts from *Pflüger's Archiv f. Physiologie,* by D. Ferrier, M.D., taken from the *Journal of the London Chemical Society.* One of these is by Pflüger, concerning the "Diffusion of Oxygen and the Process of Oxidation in the Organisms," contradicting Ludwig's statement, based on calculations of the comparative tension of oxygen in the lungs and tissues, "that the oxygen cannot disappear from the blood by diffusion alone, but that it must be used up by some reducing substance in the blood itself, as distinct from the tissues." Pflüger considers the wants of the cell as sufficient to account for the rapid diffusion of the oxygen from the blood to the tissues by the laws of diffusion alone, and finds Ludwig's calculations of the force of diffusion of oxygen from the lungs to the blood over-estimated, and that from the blood to the tissues under-estimated.

The other abstract is from an article by F. W. Dock, on the "Glycogenic Function of the Liver and its Relation to Diabetes," giving the results of some investigations on this subject which are not as yet completed. W.

BOOKS AND PAMPHLETS RECEIVED.

Report of the Wills Ophthalmic Hospital, Philadelphia (for the year ending Dec. 31, 1872). Pp. 18.

Report of the Municipal Hospital (comprising statistics of 2,377 cases of smallpox). By Wm. M. Welch, M.D., Physician in charge. Philadelphia. 1873. Pp. 81.

Lijeros Apuntes sobre La Embriaguez, Considerada como Enfermedad por Dr. Enrique A. Frimont. Vera Cruz. 1873. Pp. 28.

The Forty-ninth Report of the Officers of the Retreat for the Insane at Hartford. 1873. Pp. 70.

"The Present Attitude of Medical Science." Annual Address before the Iowa Medical Society. By A. G. Field, M.D., President. 1873. Pp. 14.

Abstracts and Intelligence.

ANTAGONISM BETWEEN OPIUM AND BELLADONNA.—Dr. Johnston *(Hospital Reports*, Shanghai, March, 1872) has had great experience of opium poisoning and the ill effects of opium-eating. During the last seven years, he has treated upwards of three hundred cases of opium poisoning. He first employed atropia in 1869. He employed it hypodermically in the severer cases, where the patient is profoundly comatose. In milder cases, emetics, the stomach pump, cold douche and constant exercise are generally sufficient. It is in the worst cases, that atropia displays its wonderful effects ; for instance, where the pupils are firmly contracted to a pin's point and immovable, the conjunctiva and cornea insensible to touch ; the face pale, the lips, eyelids and nails livid ; the pulse weak and irregular ; the breathing slow and stertorous ; the extremities cold. In such cases, he usually injects hypodermically half a grain of atropia. Within ten or twenty minutes the pupils begin slowly to dilate, and, after an hour or more, the face becomes flushed ; the breathing soft, without stertor ; and the pulse stronger. Within two hours, the full effects of the drug (atropia) are manifest, viz., widely dilated pupils, flushed face, hot skin, tranquil, slow breathing, diminished frequency and increased strength of pulse, followed by calm and tranquil sleep, from which the patient is easily awakened after three or four hours. If, within two hours, the first dose fails to dilate the pupils, flush the face, and render the breathing slow, steady and tranquil, he repeats the injection. In cases where the coma is not profound, he first employs a quarter of a grain of atropia, repeating the dose if the first be insufficient. He says, "I have observed very sudden and very unfavorable changes set in rapidly, even in the mildest cases of opium poisoning. This has happened so frequently, that I have come to the conclusion, whenever there is contraction of the pupil, and great drowsiness, after the evacuation of the contents of the stomach, it is always advisable to administer a small dose of atropia. I may remark, that in no instance have I seen any bad effects following the subcutaneous injection of atropia."—*London Medical Record,* April 9, 1873.

A NEW ECRASEUR.—Professor Dittel is at present making some experiments with a new and original kind of ligature which he applies to the removal of tumors and operations for fistula ani. The material employed is rubber, such as is commonly used by surgeons for drainage tubes. The tumors to which this method is especially applicable are those of the female breast and angiomas. In operating, the tumor should first of all be well circumscribed, in order that the ligature may be well applied ; the rubber, having been moderately extended, is then applied around the base of the tumor, firmly tied, and left to itself. The ligature, by virtue of its elasticity, exerts a continuous pressure upon the arteries which bring nourishment to the tumor, thus causing it to atrophy, and finally severing it from its attachment. The surface that is left is covered with healthy granulation, and there is no discharge. When the ligature has cut through the base, and the tumor has fallen off, the ligature is found in the shape of a ring, lying on a smooth surface of healthy granulations. If it should be found difficult to isolate the tumor, an artificial base can be made by transfixing the tumor with needles, and applying the ligature below them.

Dittel, while giving the preference in most cases to the knife, claims several advantages for this plan, which are not possessed by the *ecraseur* of Chassaignae, or the galvanic cautery. Among these advantages may be mentioned the very small amount of hæmorrhage, as well as pain, the very small discharge which accompanies the process of separation, the cleanliness of the wound left behind, and, last of all, the cheapness of the tube.

In the case of fistula, the ligature will have cut its way through in from eight to fourteen days, and is found by the patient in his bed in the form of a ring—*Letter from Vienna in the Irish Hospital Gazette.*

Correspondence.

MALAPRAXIS.

MESSRS. EDITORS,—During the recent epidemic of smallpox, I was requested to vaccinate an infant four weeks old, said to be free from all disease, but very small and imperfectly developed. The child nursed well, and the function of digestion was well performed. Finding the upper arm rather puny, I decided to introduce the virus into the leg, in accordance with a custom which prevails in certain parts of Europe. The vaccine vesicles appeared in due time at the points scarified, and were accompanied by less than the usual amount of cutaneous inflammation. Upon the third day, however, the child began to evince signs of severe constitutional disturbance, such as fever, loss of appetite, &c. It continued to sink slowly, without showing symptoms of any constitutional disease, and died on the ninth day.

The case excited considerable interest in the vicinity, the family and neighbors arriving at the conclusion that death resulted from the selection of the leg, instead of the arm, as the place for vaccination. From the menacing looks and expressions encountered when the attempt was made to obtain an autopsy, I was led to suspect that an action might be brought against me for malpractice, and, being curious to ascertain whether my deviation from the customary method of performing vaccination could involve me in a charge for malapraxis, I was led to consult the standard authorities on medical jurisprudence.

The result of these researches was not particularly reassuring, for I found that it had actually happened in the United States that an action had been brought, and *damages recovered* from a medical man, under somewhat similar circumstances.

In the case referred to (Taylor, Medical Jurisprudence, ed. 1865, p. 502), some inflammation of the skin followed the operation, which, it was alleged, was performed nearer the elbow than usual. I append the extraordinary ruling of the judge on this occasion:—

"In performing the operation of vaccination or inoculation, the physician is liable for all consequences, if he neglects the usual precautions, or fails to insert the virus in that part of the arm *usually selected* for the purpose; notstanding many other parts of the body might be proved to be equally and even more suitable locations."

In view of the above decision, my only consolation is derived from the hope that an ability to take the poor debtor's oath may tend to effectually ward off any attack upon my purse. Yours with respect,

RUSTICUS.

Medical Miscellany.

M. BROCA recommends the use of digital pressure on the main artery of the limb as the best means of relieving muscular spasm in cases of fractures.

SIR WILLIAM GULL has been presented by the Empress Eugenie with a costly gold box, bearing the Imperial cipher in diamonds, and containing a pair of sleeve-links worn by the late Emperor Napoleon.

A CHAIR of normal and pathological histology has been founded by the Spanish republican government in the University of Madrid, and endowed with a salary of 5,000 pesetas (£210). The medical faculty of the University of Valencia has protested against the establishment of a similar chair in that institution, on the grounds, *inter alia*, that the subjects are already taught by the several professors.

FOR upwards of forty years the ipecacuanha plant has been cultivated in the Royal Botanic Garden, Edinburgh; but it is only recently that the plant has been propagated. The continued destruction of the ipecacuanha plant in Brazil, and the risk of scarcity in the supply of this valuable remedy for dysentery in India, has called attention to the desirability of introducing its cultivation into the British possessions in India. Great numbers of the plant have, therefore, been sent from Edinburgh, and extensively distributed in India.—*Medical Times and Gazette.*

FEMALE DOCTORS.—The *Pharmaceutical Journal* quotes the following couplet from the "Nugæ Canoræ Medicæ," where the poet laureate of the Edinburgh New Town Dispensary predicts—

"An' when the leddies git degrees,
Depen' upon 't there's nocht 'll please
Till they hae got oor chairs an' fees,
An' there's an en' o' you an' me.
For a' that ken the woman craiter
Maun own it is her foremost faitur
To tak' to lecturin' by natur';
An' hoo she'll do 't ye sune 'll see."

BENEFICIAL INFLUENCE OF AMMONIA IN SILVERING ESTABLISHMENTS AND OTHERS WHERE MERCURY IS USED.—According to M. Meyer, ammoniacal gas has exerted a most happy effect on the health of the workmen in the great looking-glass factory of Chauny. Having observed by chance that the penetrating odor of this gas modified the suffocating odor of the workshops, he has directed, since 1868, that the floors of the various rooms be watered every evening with liquor ammoniæ. About half a litre is found to be sufficient for the purpose. The explanation is not very clear, but he vouches for the good that results from it.—*La France Médicale*, March, 1873.

THE CLINICAL SOCIETY.—The last meeting of the session took place on Friday of last week, when several papers were read which gave rise to considerable discussion. A contribution by Dr. Greenhow, on the treatment of a case of diabetes by means of skimmed milk, was followed by a sharp passage of arms between Dr. Pavy and Dr. Donkin, which led to the protest of the President. Dr. Pavy expressed his utter disbelief in the skimmed milk treatment of disease; and said that, after a lengthened trial, he had come to doubt the good results alleged by Dr. Donkin to have been obtained in that gentleman's hands. He questioned the propriety of the author of the paper in lending his position to countenance the treatment by skimmed milk. Dr. Donkin, in reply, offered facilities for inquiry into the cases which had been cured or alleviated by the method of treatment which he advocated.—*British Medical Journal.*

Diagnosis of Phosphorus Poisoning by the Urine.—Dr. Poulet *(La France Médicale)* mentions the case of a man, æt. 65, who had been treated for two months for a supposed degeneration of the liver, with anæmia. Dr. Poulet examined the urine by adding strong nitric acid to it, and evaporating in a porcelain capsule over a spirit lamp. When the temperature was lowered the contents of the capsule became all at once inflamed, so that the capsule looked like a ball of fire. The residue, on analysis, gave all the reactions of phosphoric acid. Dr. Poulet comes to the conclusion that when phosphorus is taken into the system it is eliminated by the urine in the form of hypophosphoric acid, and that the method of analysis above described should be made use of in cases of suspected poisoning by phosphorus.—*Dublin Medical Press and Circular.*

NOTES AND QUERIES.

"A Country Doctor" is congratulated upon his powers of inferential deduction, but advised to re-read the sentence referred to, by the light of universal experience, according to which every disease of the skin, from acne to zoster, was, during the "panic," considered, or at least feared, by the people as being probably smallpox. E. W. Jr.

Are not the "Two Cases of supposed Tubal Pregnancy," referred to on page 518 in the Journal of June 5th, better explained if classed under the head of Pelvic Hæmatocele? I will refer the reporter to vol. v. Trousseau's Clinical Medicine as containing one of the best articles upon this topic. J. O. Whitney.
Pawtucket, R. I., June 23, 1873.

Disgusting Exaggeration.—"An enormous number of autopsies daily, at least ten"! *Vienna Correspondent of the New York Medical Journal.*
When will physicians cease to talk of their "infinite number of cases," "vast many instances," and the like? How can one be trusted in other matters who talks so loosely in this? Verb. Sap.

Ergotism.—Some weeks ago, any one who had seen a case of ergotism was requested to describe it. Once more, the inquirer would ask the description. Has any physician ever seen any bad effects from the use of ergot? How long had it been used and in what doses? Please Answer.

An Aurilave.—An instrument by this name is advertised in the shops to clean ears out with. They used to tell us that nothing smaller than the little finger should be put in the ear. Why.
Answer.—Because anything smaller than the little finger has a tendency to inflame the lining membrane of the ear. The frequent use of the aurilave will probably be followed by suppuration, and, finally, by deafness.

Mortality in Massachusetts.—*Deaths in fourteen Cities and Towns for the week ending June* 21, 1873.

Boston, 125—Charlestown, 15—Worcester, 14—Lowell, 15—Chelsea, 5—Cambridge, 13—Salem, 9—Lawrence, 8—Springfield, 4—Lynn, 13—Newburyport, 6—Somerville, 7—Fall River, 12—Haverhill, 2. Total, 248.
Prevalent Diseases.—Consumption, 42—pneumonia, 22—scarlet fever, 15.
Five deaths from cerebro-spinal disease are reported.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, June 28th, 102. Males, 59; females, 43. Accident, 4—apoplexy, 2—aneurism, 1—inflammation of the bowels, 1—disease of the bladder, 1—bronchitis, 2—inflammation of the brain, 2—disease of the brain, 5—cancer, 2—cerebro-spinal meningitis, 2—cholera infantum, 6—consumption, 14—convulsions, 1—debility, 1—diarrhœa, 2—dropsy of the brain, 3—dysentery, 2—epilepsy, 2—erysipelas, 1—scarlet fever, 6—typhoid fever, 5—disease of the heart, 2—disease of the kidneys, 2—inflammation of the lungs, 9—marasmus, 4—measles, 1—necrosis of leg, 1—old age, 4—paralysis, 1—prostatitis, 1—premature birth, 1—rheumatism, 1—pyæmia, 2—disease of the stomach, 1—syphilis, 1—tabes mesenterica, 1—ulcers of stomach, 1—whooping cough, 2—unknown, 2.
Under 5 years of age, 44—between 5 and 20 years, 9—between 20 and 40 years, 22—between 40 and 60 years, 16—over 60 years, 11. Born in the United States, 65—Ireland, 24—other places, 13.

THE

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Original Communications.

THE RESULT OF TWO POST-MORTEM EXAMINATIONS, PERFORMED AT THE SAME TIME, SIDE BY SIDE, IN THE SAME ROOM, THE ONE ILLUSTRATING THE PATHOLOGICAL ANATOMY OF MALARIAL FEVER, AND THE OTHER OF YELLOW FEVER.

By Joseph Jones, M.D.

Professor of Chemistry and Clinical Medicine, Medical Department, University of Louisiana, Visiting Physician of Charity Hospital, New Orleans.

The following post-mortem examinations performed upon a subject of malarial fever, and upon one of yellow fever, simultaneously, in the dead house of the Charity Hospital of New Orleans, are selected from the records of the numerous autopsies performed in several of the Southern States during a series of years, in the investigations which I have instituted upon the nature and treatment of these diseases.

Case.—*Pernicious Malarial Fever.*—Native of Austria, stout, full form; entered Ward 14, Charity Hospital, in a comatose condition; complexion, jaundiced; pulse, rapid and feeble; temperature of extremities, depressed, of head and trunk, elevated several degrees above the normal standard; respiration, labored and embarrassed; urinary excretion abundant and without albumen.

Sinapisms and the free use of quinine and stimulants failed to arouse the patient, and death took place within 24 hours after his entrance into the hospital. Died October, 1871.

Autopsy, twelve hours after Death.—Exterior.—Skin jaundiced, but to a much less degree than in yellow fever. Skin of dependent portions of body mottled, from capillary congestion, but to a less marked degree than in yellow fever. The cut surface of the muscles presented a purplish hue, and the change to the arterial hue when exposed to the atmosphere, was much slower and less perfect than in yellow fever. Putrefactive changes slow.

Head.—Bloodvessels of brain congested, but no structural alterations of the membranes or structures of the brain were observed.

Heart.—Normal in color, presenting the deep red, muscular appearance of the healthy human heart. Muscular fibres of heart, firm and of normal appearance under the microscope. No deposits of oil, as in yellow fever, in the muscular structure of the heart. Cavities of the heart contained dark grumous blood, and large laminated, light yellow, fibrous concretions, attached to the columnæ carneæ and chordæ tendineæ, and sending off branches into the pulmonary arteries.

Lungs.—Dependent portions congested with blood; otherwise normal.

Stomach.—Contracted; contained a small quantity of mucus, colored yellow by bile. Mucous membrane slightly congested, and ecchymosed. Reaction of stomach, acid.

Intestines.—Normal in appearance.

Liver.—Upon the exterior, slate-colored; and when cut, bronze within. Under the microscope, the liver presented a pale appearance, with little oil or granular albuminoid matter. The liver, especially in the peripheral portion of the lobules, contained masses of the coloring matter of the blood of various sizes. The peculiar color of this liver, could, to a certain extent, be extracted by boiling water. The filtered decoction was of a brownish mahogany color, as if it contained the coloring matter of the blood, whilst the decoction of the yellow fever liver, was of a bright golden color.

The blood, issuing from the cut surface of the liver, remained of a dark purplish hue, and did not change to a brilliant scarlet, as in the yellow fever liver. Careful examination showed that the dark color of this liver was due to several causes, as the deposits of black pigment matter in the portal and hepatic capillary networks, the dark, unchanging nature of the portal and hepatic blood, and the deep greenish color of the bile.

Upon chemical examination, the liver was found to contain animal starch, but no grape sugar.

Gall-bladder.—Distended with more than 1000 grains of thick bile, having a high specific gravity, viz.: 1036. The bile is more abundant in malarial fever, and is of a deeper color, and more inclined to the formation of lumpy masses than in yellow fever. In thin layers, and when added to water, it presents a more decided green color, whilst in yellow fever the bile gives a golden yellow color in thin layers, and when added to water. The difference in the color of the biliary secretion in the two diseases, may be connected with the differences of color in the color of the liver, bile and blood.

Under the microscope (one-fifth inch, Smith & Beck, London), the granular concretions in the bile were found to be composed chiefly of epithelial cells, from the mucous membrane of the gall-bladder, cells from the biliary ducts, and casts of the biliary tubes.

Spleen.—Enlarged and softened. It was impossible to remove the spleen without rupturing the capsule. It resembled a bag filled with softened mud.

Under the microscope, the splenic mud was found to consist of numerous colored corpuscles, variously altered, and masses of pigment matter. No fine oil-globules were observed in the spleen.

Kidneys.—Normal in appearance and structure.

Urinary Bladder.—Distended with reddish brown urine, of acid reaction. Urine free from albumen and urinary casts. Urea abundant, as in the urine of fever. Chloride of sodium in normal amount. There is no diminution of chlorine and chlorides in the urine of malarial fever, as in that of pneumonia. When the chlorides diminish in the urine of this disease, such diminution is clearly referable to fasting.

Case.—*Yellow Fever.*—Stout German, attacked in the full vigor of health. Suppression of urine during the last forty-eight hours before death. Copious ejections of black vomit. Reaction of black vomit strongly *alkaline.* Black vomit contained *urea* and *ammonia.* Under the microscope (one-fifth to one-eighteenth objectives), the black vomit was found to contain numerous altered blood-corpuscles. No animalculæ or fungi were observed when the black vomit was collected in clean vessels and examined immediately after its ejection from the stomach. The urine collected during the stage of fever, and calm, or depression, presented a light yellow color, and was loaded with albumen and casts of the tubuli uriniferi. Death preceded by symptoms of uræmic and biliary poisoning, jaundice, intoxication, delirium, coma and convulsions. Patient died on the sixth day of the disease, October, 1871.

Autopsy, three hours after Death.—Exterior.—Full form, bloated, swollen countenance. Skin of face and upper portions of trunk, of a golden yellow color. Dependent portions of body of a mottled, purplish and yellow ecchymosed appearance. Black vomit running from corners of mouth, and trickling down sides of face and neck. When the muscles were cut, a large quantity of thick blood escaped, which changed to a bright scarlet hue upon exposure to the atmosphere.

Putrefactive changes rapid; the body emits a foul, disgusting odor. The body examined in the preceding observation, although it has been nine hours longer in the dead house, is comparatively free from bad odor. In many cases of yellow fever, especially when the functions of the kidneys have been arrested before death, the vascular system is distended with blood, and the putrefactive changes take place with great rapidity and energy, and sometimes even appear to commence before death, the body exhaling a disagreeable odor.

Head.—Beyond congestion of the bloodvessels of the membranes and structure of the brain, no marks of inflammation or structural alteration were observed.

Heart.—Pericardium greatly congested; the vessels, even the minute capillaries, presenting a beautiful, arborescent appearance, and loaded with colored corpuscles. Heart of a pale yellow and brownish yellow color, as if undergoing fatty degeneration. Structure of heart, flabby and somewhat softened. Numerous oil-globules deposited within the muscular fibrillæ of the heart. Cavities of the heart contained dark fluid blood free from fibrinous concretions. Blood contained *urea*, and carbonate of ammonia in abnormal quantities. Bile also was present in considerable quantities. When a drop of the blood was allowed to fall upon a piece of white filtering paper, the central portion in which remained the colored corpuscles, was of a bright red color, while around this extended, by capillary attraction, a bright golden-colored areola. Urea and bile were detected in considerable quantities in the brain, heart, spleen and kidneys. The urea was found also in abnormal quantities in the liver. The brain appeared upon analysis to contain the largest proportion of urea. The fibrin of the blood was almost entirely destroyed, being not more than 0.1 in 1000 parts of blood. Upon standing, the colored blood-corpuscles rapidly disappeared, apparently from the effects of the bile and ammonia.

That bile has the effect of dissolving the colored corpuscles, I have determined by actual experiment. In such experiments, the blood of certain cold-blooded animals, in which the colored corpuscles are large, is the best; the blood of the Congo snake, a reptile which is quite frequently captured in the gutters of the streets of New Orleans, is to be preferred, as the colored blood-corpuscles are of an extraordinary size. I have shown, more than sixteen years ago, that it is possible to demonstrate, by the employment of certain re-agents, under the microscope, that the blood-corpuscles in these cold-blooded animals have a distinct *cell-wall.* When the bile of yellow fever and of other diseases is added to the blood of the Congo snake or of other animals, the outer cell-wall is rapidly destroyed, and the nucleus liberated; and if the bile be added in sufficient quantities, the nucleus is in like manner dissolved.

Lungs.—Dependent portions greatly congested with blood; otherwise normal.

Stomach.—Mucous membrane of stomach intensely congested, softened and eroded. Reaction of the mucous membrane of the stomach strongly alkaline. The stomach contained sixteen ounces of dark grumous blood, or black vomit, the reaction of which, although removed only three hours after death, was *strongly alkaline;* and ammonia was present in such large quantities that when a rod, dipped in hydrochloric acid, was held over the mucous membrane of the stomach, or over the black vomit, dense fumes of chloride of ammonium were formed, as if the rod had been held over a bottle containing liquor ammoniæ. Chemical analysis revealed the presence of *ammonia*, and, also, of *urea*, in the black vomit.

Under the microscope (one-fifth to one-eighteenth objectives), the black vomit was found to consist almost entirely of colored corpuscles, broken capillaries, and cells of the mucous membrane of the stomach, floating in an alkaline serous fluid.

Intestines.—Dark-colored and distended with gas.

Liver.—Yellow color, resembling that characteristic of fatty degeneration of this organ. Under the microscope, the texture of the liver was found to be infiltrated with oil. The liver cells were large, distinct, swollen, and contained much golden-colored oil, in the form of distinct globules of various sizes.

Chemical analysis revealed the presence of fat in abnormal quantities, and also of urea, and of animal starch and grape sugar.

The liver of yellow fever, as far as my observations extend, and according to the observations of Louis and many others, is of a bright yellow color. It is probable that this color, as in the case of that of the malarial liver, varies with the length of the attack and the effects of previous diseases.

The decoction of this liver was of a bright golden color, and very different from the dark, brownish red of the decoction of the malarial liver. The golden color of this yellow-fever liver could be extracted, both by alcohol and water.

This liver was firmer and harder than that of the malarial liver in the preceding case; it contained much less blood, and was much less readily acted upon by liquor potassæ and acids. Liquor potassæ readily dissolved the malarial-fever liver, and the decoction presented the appearance of venous blood, whilst no such effect was produced by this re-agent upon the yellow-fever liver.

Gall-bladder.—Contained only 100 grains of thick bile, while the gall-bladder in the case of malarial fever contained 1000 grains and over. In yellow fever, the gall-bladder is generally relaxed, and only partially filled, and rarely contains more than 120 grains of bile. In yellow fever, the vomiting is rarely bilious, unless in the very commencement of the disease. The stomach and small intestines are rarely, if ever, discolored by bile in yellow fever, whilst in malarial fever it is common to find the gastro-intestinal mucous membrane thus discolored.

Spleen.—Normal in size and appearance. In many cases of yellow fever, the spleen is neither enlarged nor softened, nor altered in appearance, either upon the exterior or within. There appears to be no special alteration or destruction of the colored blood-corpuscles, in the spleen of yellow fever, as in that of malarial fever.

Kidneys.—Brownish yellow color. Kidneys contained much free fat. When thin sections were made with Valentine's knife, and examined under the microscope (one inch, one-half, one-third, one-fourth, one-fifth, one-sixth inch objectives), the Malpighian corpuscles and tubuli uriniferi were found to be filled with oil-globules, detached epithelial cells and yellow granular albuminoid matter.

The sudden suppression of urine in yellow fever, which is even of more fatal import than jaundice and black vomit, is due, as far as my observations extend, to those peculiar structural alterations which we have just described, rather than to congestion of the capillaries of these organs.

If suppression of urine in yellow fever were simply due to capillary congestion, or defective innervation of the kidneys, it might be possible to re-establish the excretion by the use of diuretics; but when suppression of urine is once established in this disease, it is permanent, and, as far as my experience extends, cannot be removed by any means heretofore applied. My observations furnish an explanation of the universally fatal character of urinary suppression in yellow fever.

The desquamation of the excretory cells of the tubuli uriniferi, and the impaction of the Malpighian corpuscles and tubuli uriniferi, with granular albuminoid and fibroid material, is the characteristic lesion of these organs in yellow fever in cases of urinary suppression.

In every case of yellow fever, the kidneys are more or less involved, as is manifest from the appearance of albumen and urinary casts and cells in the urine.

Many of the peculiar symptoms of this disease, as, the rapid lowering of temperature, slow pulse, intoxication, coma, delirium and convulsions, the sudden deaths, and even the supervention of copious hæmorrhages from the stomach and bowels, are referable to the lesions of the kidneys, established by my investigations.

Suppression of urine favors the supervention of black vomit by the effects of the retained urinary constituents and the products of their decomposition in the blood, and by the consequent obstruction of the bloodvessel system with altered blood, the alkalinity of which has been greatly increased.

Urinary bladder.—Contained only one teaspoonful of light yellow urine, which represented the whole amount excreted during the last forty-eight hours of life. Urine loaded with albumen. Casts, kidney cells and granular albuminoid matter.

New Orleans, La., June 6, 1873.

SECONDARY DIVERGENT STRABISMUS, CAUSED BY AN OPERATION FOR CONVERGENT STRABISMUS AND EXISTING FOR THIRTY YEARS; CURED BY TRANSPLANTATION OF THE INJURED MUSCLE AND DIVISION OF ITS ANTAGONIST.

By Hasket Derby, M.D., Boston.

It has been justly observed that the cosmetic effect of the operation for secondary strabismus may, as regards facial expression, be considered one of the triumphs of surgery. I have thought, therefore, that the following case might possess interest, even for those not specially interested in ophthalmic matters.

A lady, now fifty years old, was operated on for convergent strabismus of the left eye, at the age of twenty. Her condition, when she consulted me in January last, was substantially what it had been for the past thirty years, and may be best appreciated by a glance at Fig. 1. The left eye diverged some three and a half lines. Its motion inward was greatly restricted, the utmost effort of the internal rectus only sufficing to bring it one line short of the middle of the palpebral aperture. The vision of this eye was extremely imperfect, fingers being counted at six feet, while no letter of the test card could be recognized. The right eye was hypermetropic $\frac{1}{7}$, and had normal vision. On some occasions, annoying diplopia would be experienced.

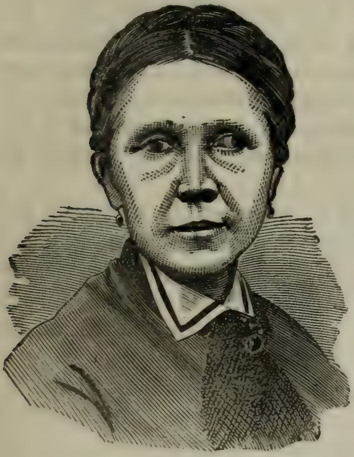

FIG. 1.

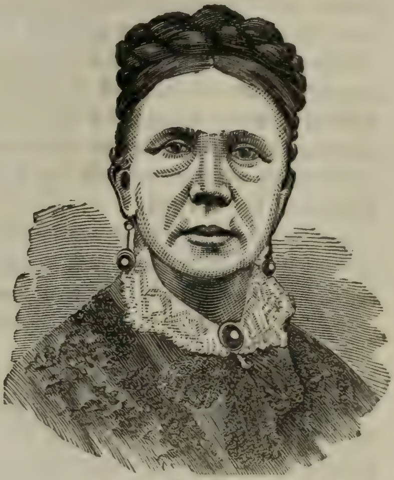

FIG. 2.

For the relief of this deformity, the operation of simple division of the external rectus had been already proposed to the patient. The injudiciousness of this advice can best be shown by quoting the classic words of von Graefe :—

" For all *considerable diminutions of mobility, or for entire loss of the same, bringing forward the muscle is the only proper remedy.* Even if we succeeded by, for instance, partial excision or excessive setting back, in so reducing the strength of the abducens as to bring about a symmetrical relation between the amount of movement outwards and the amount of movement inwards, should we be entitled to regard this as a cure, properly so called? Inasmuch as the existing immobility depended, not on contraction of the antagonist, but solely on the fact that the activity of the internus had been circumscribed by too extreme a recession or imperfect union with the bulb, it is evident that the abducens must be brought into a like condition in order to establish an equilibrium, and what should we then have accomplished? We should have an eyeball immovable in two directions, and more prominent than before. This prominence of the eyeball gives a goggling expression, and thus is often more distressing than the deviation itself; while, in connection with the sinking of the caruncle, it produces a cosmetic effect in no ways allied to that of ordinary divergent strabismus. A correction consisting in the setting back of the antagonist would, even if it were practicable, seem here less desirable than in cases of complete paralysis."*

The following operation was consequently performed, January 4th of the present year.

The patient was etherized, and, beginning at the inner edge of the cornea, a broad flap of conjunctiva was dissected back towards the caruncle, a distance of six lines. Care was taken to thoroughly remove the subconjunctival tissue, in order that nothing might prevent the healing of the muscle at its new point of insertion. The internal rectus was found reduced in size, attached far behind and somewhat above its old position. It was divided at its insertion, dissected away from its attachments, brought forward and laid upon the cornea, spread out so as to half cover it. In this position it was secured by two sutures through the conjunctiva, above and below the centre of the cornea.

An incision was now made over the insertion of the externus, and this brought into view. A single stout thread was armed with a needle at either end. One was passed into the centre of the insertion, as near the eyeball as possible, and made to emerge through the upper edge of the muscle. The second was passed in at the same point and brought out at the lower edge. The muscle being next divided, just outside the thread, the eyeball was moved readily in any direction by means of the two threads gathered into the hand of the operator. It was rotated as far inwards as possible, so that the edge of the cornea touched the caruncle, and the ends of the thread secured firmly to the opposite temple. A compressive bandage was applied.

Thirty hours later, there had been but trifling pain, and I removed the thread from the temple. Jan. 6th, the remaining sutures were extracted. The muscle, of course, receded in its centre, and left the cornea free. The patient rapidly convalesced, and returned to her home in the West, Feb. 12th. The second engraving shows the condition of the eye. No strabismus existed, and there was excellent motion in every direction.

The operation will be observed to have been a combination of the two methods of "sewing forward" and "transplanting forward" (Vornähung and Vorlagerung).

Wet-Nursing.—The average mortality of infants one year old throughout France is 18 per 1,000. In the ten departments which chiefly receive *les petits Parisiens,* the infants whom fashion and morality in France consign to rural wet-nurses, the mortality is 51·68 per 100. In the department of la Creuse, where people marry early and mothers nurse their own children, the mortality is 12 per cent.; in that department (spite of much emigration), births exceed the deaths; in all others the deaths exceed the births; and a gradual depopulation is proceeding in France, which excites the liveliest apprehension of the government.—*British Medical Journal,* May 17, 1873.

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* Archiv für Ophthalmologie, 3, 1, 371.

Progress in Medicine.

REPORT ON MEDICAL CHEMISTRY.

By Edward S. Wood, M.D.

[Concluded from p. 11.]

Phosphorus Poisoning.—From the experiments of Dr. Dybkowsky (*Beitrag zur Theorie der Phosphorvergiftung.* Hoppe-Seyler, *Med. Chem. Untersuchungen,* Erstes Heft, 1866) it appears that the action of phosphorus in cases of poisoning must be explained chiefly by the formation of phosphoretted hydrogen, and not by the absorption of the phosphorus as such, nor by its oxidation in the stomach or blood to the form of phosphoric acid. The mistake of those authors who state that phosphoretted hydrogen is not poisonous, has resulted from the fact that they experimented with that variety of the gas made from the phosphide of calcium, which is spontaneously inflammable, so that in reality the products of its combustion, phosphoric acid and water, were administered, and not the gas itself. Dr. Dybkowsky, however, administered phosphoretted hydrogen made by reduction from phosphorous acid, by which a non-inflammable variety is produced, which, administered to animals by injection into the rectum, is rapidly fatal, and gives rise to symptoms and *post-mortem* appearances similar to those produced by phosphorus itself. Moreover, it was proved that phosphoretted hydrogen is formed by placing phosphorus in blood, and it is probable that it is produced in the intestine from phosphorus by contact with nascent hydrogen. Phosphoretted hydrogen was also eliminated with the breath in certain cases of poisoning by phosphorus, as shown by the reducing action of the breath upon a solution of nitrate of silver, a reaction caused only by phosphoretted hydrogen and free phosphorus, the latter being found absent by the non-luminosity of the breath. At the same time, it is certain that a very small amount of the phosphorus ingested may become oxidized in the alimentary canal, and the phosphoric acid thus produced cause slight irritation, or even corrosion, if oxidized at the expense of the oxygen of the tissues, as happens in rare cases, when bits of the phosphorus adhere to the mucous membrane of the stomach or œsophagus. Again, it is certain that a very small portion of the phosphorus may be absorbed as such, since it is slightly volatile at the temperature of the body, and can be eliminated with the breath unchanged, since, in a few cases in animals poisoned by phosphorus which was introduced into the stomach, the œsophagus having been previously cut and tied, the breath was luminous. From these facts, it appears that the action of phosphorus is almost entirely due to the action of phosphoretted hydrogen, which may be formed either in the intestine or in the blood from that portion which is absorbed unchanged. Its action when in the blood is not quite clear, although a part may be oxidized at the expense of the oxygen of the blood, and a portion is eliminated by the lungs unchanged. If phosphoretted hydrogen be injected into the blood, its action is somewhat different from that when absorbed from the intestine; it invariably produces inflammation or irritation of the lungs.

The action of phosphorus upon the mucous membrane of the stomach is, according to Dr. Hoffman *(Ann. d'Hygiéne*, Oct., 1872, from *Vierteljahrsch. f. gericht. Med.*, xii., No. 2), of two kinds, local and general. The local action is due to the oxidation of a small amount of phosphorus in the stomach, as mentioned above, phosphoric acid being formed, the amount depending upon the amount of oxygen in the stomach; but generally this action is not extensive, the phosphoric acid not being as active as the ordinary mineral acids. The general action is that of fatty degeneration of the glands, taking place without regard to the surface from which the phosphorus is absorbed, and commencing within twenty-four hours after its ingestion or absorption. The glands are swollen and filled with a finely granular substance, appearing whitish by reflected light, and greyish yellow by transmitted. Then the cells become swollen, filling the ducts, the nuclei become less and less visible, and the canal becomes filled with a homogeneous, opaque mass, which is not rendered clear by acetic acid. The mucous membrane itself appears grayish-yellow and slightly thickened, owing to the swelling of the glands. Later, fatty drops exude from the mass which fills the ducts. This mass gradually becomes softer and softer, until, finally, nothing can be seen except a granular detritus, and the mucous membrane then appears yellow.

Experiments undertaken by O. Schifferdecker in regard to the analysis of tissues for phosphorus by means of Mitscherlich's apparatus *(Fres. Zeitsch.*, 1873, Heft 3) show that by distilling organic substances, or only water containing phosphorus, until phosphorescence is no longer visible in the condenser, only a part of the phosphorus passes over into the receiver, about one fourth of it being oxidized in the retort or flask, and remaining there. The proportion which passes over and can be estimated as phosphoric acid in the distillate is variable, being usually from one-half to three-fourths of the amount originally in the retort.

Combination of the Alkaloids with the Biliary Acids.—W. F. DE L'ARBRE *(Fres. Zeitsch.*, 1872, Heft 4, from *Pharm. Centralb.*, 1872, p. 177) has studied the action of the bile and the biliary acids upon the alkaloids, and has found that the alkaloid and the biliary acid unite with each other, when bile or a solution of a biliary salt is added to a solution of any of the soluble salts of the alkaloids. In the case of strychnia, quinia, quinidia, cinchonia, brucia, veratria and emetia, the compounds formed are with difficulty soluble in water, but are quite soluble in an excess of bile, or solution of biliary salt. The compounds formed with morphia, nicotia and conia are, however, easily soluble in water. The glycocholates of strychnia and morphia, the taurocholate of morphia, and the hyoglycocholate of brucia are crystalline; but the remainder, so far as observed, are amorphous. The difficult solubility of some of these compounds is offered as a possible explanation of the accumulation of some of the alkaloids in the liver, and hence the advantage of choosing that organ in analyses for absorbed organic poisons.

Detection of Digitalin in Chemico-legal Analyses.—HEINRICH BRUNNER *(Ber. d. deutsch. Chem. Gesell. zu Berlin*, 1873, Heft 3) proposes a new test for digitalin, based upon the fact that this principle is a glucoside, yielding glucose by decomposition. The test recommended is Pettenkofer's test, concentrated sulphuric acid and bile, or a solution of biliary acids, being added to the suspected substance. If digitalin is present, it will be decomposed by the sulphuric acid and glucose formed, which will produce the characteristic cherry red or violet color. This test, the author states, is much more delicate than the sulphuric acid and bromine test, which is very delicate when we have the pure substance to work with, but is rarely satisfactory when applied to the extract obtained from animal tissues by the Stas-Otto process. (Extraction of the acid residue of the alcoholic extract with ether, first while still acid, and again after rendering it alkaline.) From the acid residue, the ether removes the largest part of the digitalin as a resinous mass, in which the sulphuric acid and bromine test is rarely successful. A small amount is removed by the ether after the residue is made alkaline; but delphinin is also removed from alkaline solutions by ether, and behaves like digitalin when treated with sulphuric acid and bromine. The residue, obtained after treating about a quart of beer to which was added, in one instance, 0·05 grm. (about ⅚ gr.) and in another 0·03 grm. (½ gr.) by the Stas-Otto process, did not respond to the sulphuric acid and bromine test, while a small portion of it gave a good reaction for sugar by Pettenkofer's test. This test will serve to distinguish digitalin from vegetable alkaloids, and the physiological test from the other glucosides which behave like digitalin with sulphuric acid and bile.

The *Journal de Chimie Médicale* (May, 1873) gives the properties of crystallized digitalin, and the process adopted by Nativelle to obtain it from the powdered leaves, a process which can be used, with certain unimportant modifications, to extract it from animal tissues in cases of poisoning. Digitalin crystallizes in short and delicate needle-shaped crystals, and possesses an intense and persistent bitter taste. It is but slightly soluble in water, soluble in twelve parts of cold and six of boiling alcohol of 90°, less soluble in absolute alcohol, and nearly insoluble in ether. It is soluble to almost any extent in chloroform, which is its proper solvent, and serves as a reagent for testing its purity. It is rapidly dissolved by a solution of chloral hydrate, the solution becoming greenish blue in color. The concentrated mineral acids dissolve it, hydrochloric acid producing an emerald green color, sulphuric acid a green, which, if subjected to the action of bromine fumes, changes to a dark red, nitric acid a yellow, aqua regia a yellow which changes to an obscure green, and a mixture of equal parts of sulphuric and nitric acids produces a rose color which becomes changed to a deep violet. When heated on platinum, it melts, swells up, becomes brown, and disappears without leaving any traces. It contains no nitrogen, but is composed of 51·33 per cent. of carbon, 6·85 per cent. of hydrogen, and 41·82 per cent. of oxygen. The advantages of having such a preparation, which has a definite composition and definite properties, are obvious. Seven and one-half milligrammes (about one-ninth of a grain) were administered to an adult without any toxic effect being produced.

The method of obtaining it from the plant is as follows. The powdered leaves are digested with alcohol of 50°, filtered, and the filtrate concentrated to a weight about equal to the weight of the leaves originally used. This fluid is diluted with about three times its weight of water, when a fatty deposit is gradually formed, which contains nearly all of the digitalin, mixed with digitin and coloring matter. This deposit is collected on a filter paper, and treated with twice its weight of boiling alcohol of 60°, which dissolves the digitalin and digitin, these being gradually deposited in the form of crystals upon the surface of the alcohol and upon the inside of the vessel, if the solution be placed in a cool place. The crystallization is complete in eight or ten days. These crystals are collected together, washed with a little dilute alcohol to free them from the mother liquor, and then treated with chloroform, which dissolves the digitalin, leaving the digitin upon the filter. The chloroform leaves it, after evaporation, in an amorphous form, but it can be crystallized by treating again with alcohol, and placing in a cool place, when it will crystallize out as before.

Detection of Brucia, Emetia and Physostigmia in Animal Fluids and Tissues. PANDER. *Chem. Centralbl.*, 1872, No. 28, pp. 437 and 440.—(From *Beiträge zu dem gericht.-chem. Nachweise des Brucins, Emetins, und Physostigmins in thierischen Flüssigkeiten und Geweben. Dorpat.* 1871). The results arrived at by the author from his investigations with the above alkaloids are as follows.

Brucia can be detected, either after its ingestion or subcutaneous injection, in all of the fluids and tissues of the body, even in those of the fœtus, but it is found most largely in the liver and kidneys. Decomposition of the tissues for three months had no influence upon the brucia. The most delicate test for brucia was found to be Dragendorff's modification of the nitric acid test, namely: one-fiftieth of a milligramme (1 mg. = $\frac{1}{66}$ grain) was dissolved in sulphuric acid in a watch glass, and a drop of nitric acid allowed to mix slowly with this solution; a rose red color is first produced, changing to an orange, and then to a yellow; stannous chloride or ammonic sulphide produces in this mixture a reddish violet color, if the amount of brucia present equals one-tenth of a milligramme. A solution of iodine in iodide of potassium (Liquor Iodinii Comp. U. S.) is the most delicate precipitating agent for brucia, a kermes brown precipitate being produced, if the solution contains $\frac{1}{50000}$ of its weight of brucia, or an orange red one, if it contains $\frac{1}{5000}$. The presence of strychnia does not interfere with the mixed sulphuric and nitric acid test.

Emetia can also be detected in all of the fluids and tissues, but most largely in the stomach, liver and blood. It is partially, at least, eliminated by the kidneys. Decomposition of the tissue destroys the emetia. It was detected in the viscera of cats poisoned with 0.1 grm. (about one and a half gr.) and in some of the organs, if the dose administered were only 0.05 grm. For the detection of emetia, the most delicate reagent is concentrated sulphuric acid which contains molybdic acid. (Each cc. of acid containing 1 mgrm. sodic molybdate, "Frohde's reagent.") A red color is produced which changes to a green, if $\frac{1}{100}$ mgrm. of emetia is present. As precipitating agents the most delicate are potassio-bismuth iodide, potassio-cadmium iodide, liq. iodinii comp., picric acid, and phosphomolybdic acid, any of which will precipitate $\frac{1}{50}$ mgrm. of emetia dissolved in 25,000 times its weight of water.

Physostigmia can be detected in the saliva and bile almost immediately after ingestion. It can also be detected in the blood, liver, stomach and small intestines, both by chemical and physiological tests. It could not be found in the blood after the latter had been decomposing for three months. The behavior of physostigmia with bromine water, is its most characteristic test, a reddish brown color being produced in a solution of the sulphate diluted 10,000 times; in this way $\frac{1}{20}$ mgrm. can be detected. Calcic hypochlorite (chloride of lime) gives with one-half to one mgrm., a red color after the lapse of a few minutes. Potassio-bismuth, iodide and phosphomolybdic acid precipitate it, if diluted 25,000 times with water, potassio-mercuric iodide (Mayer's reagent), if diluted 5000 times, and chloride of gold, if diluted 2000 times. Contraction of the pupil was not produced in dogs by amounts less than $\frac{1}{100}$ mgrm.

The method employed for the isolation of these substances from the tissues and fluids was Dragendorff's, namely: to extract the alkaloid from the tissue with very dilute sulphuric acid, filter, and evaporate the filtrate after neutralizing with magnesia; extract the residue with alcohol of 70 per cent. acidulated with sulphuric acid, filter, distil off the alcohol, and shake the acid residue successively with petroleum ether, benzin, and amyl alcohol; then render the acid liquid alkaline with ammonia, and shake again with petroleum ether. Benzin will remove physostigmia from acid solutions and deposit it after evaporation, and petroleum ether will remove the brucia and emetia from the ammoniacal solution, and deposit them after evaporation.

Reactions of Quinia and Morphia.—F. A. Flueckiger (*Neues Jahrb. der Pharm.*, Bd. 136), has investigated as to the delicacy of the ordinary test for quinia, and finds that if the fluid be mixed with one-tenth its volume of chlorine water, and then a drop of ammonia water added without shaking, a green zone is first formed which gradually extends through the whole fluid when it contains only $\frac{1}{4000}$ of its weight of quinia.

If bromine be used instead of chlorine, the test is much more delicate, the green color appearing when only $\frac{1}{20000}$ of quinia is present. If the fluid contains more than $\frac{1}{2500}$ of its weight of quinia, bromine produces a precipitate instead of a change of color, and hence is not as useful as chlorine in strong solutions. The bromine test should be performed in a test tube filled one-fifth full of the fluid to be tested, and bromine fumes poured into the tube, till the upper portion of the fluid has absorbed enough of the gas to give it a yellow color, while the lower portion remains colorless; then a drop of ammonia water should be allowed to flow down the side of the test tube gently, so as to float on the surface of the liquid and not mix with it. A green layer is thus produced which changes to a blue, the color being more intense and more permanent than that produced by chlorine water.

Morphia solutions treated with chlorine water and ammonia turn first red, and, finally, brown. The limit of this reaction is one part in 1000 in solution, and hence this is not as delicate as the iodic acid and starch reaction, the limit of which is 1 to 10,000.

If both morphia and quinia are present in a solution, the morphia reaction will be first formed, but we can always obtain the quinia test by diluting to such an extent that the proportion of morphia in the solution shall be less than 1 to 1000.

Poisonous Action of Substances belonging to the Benzol Group.—By Dr. Starkow. *Journ. de Pharm. et de Chim.*, Apr., 1873, from *Virchow's Archiv, III.*, No. 4. From these investigations it appears that the nitro-substitution products of these substances, if soluble, are more poisonous than the substances themselves, and produce a special action upon the blood. The blood of an animal poisoned with binitrobenzol, if subjected to the action of the spectroscope, shows an absorption band between the red and orange of the spectrum, corresponding to the Fraunhofer line C, in addition to the two normal oxyhæmoglobin bands ; reducing agents, such as ammonic sulphide, change the position of this band a little to the right, and ammonic hydrate causes it to disappear entirely. The blood of an animal poisoned with nitrobenzol (mono-), nitro-aniline, or nitro-naphthaline, shows the same band, but if these substances are mixed with the blood outside of the body, the band does not appear immediately as in the case of binitro-benzol, but only after the lapse of several hours. These mono-nitrosubstitution products are less active poisons than the binitro ones, but are much more active than the simple benzol, aniline, &c., or the chlorine substitution products, as chloro-benzol, none of which give rise to the above absorption band, although chloro-benzol when mixed with blood causes a disintegration of the blood globule, and crystals of hæmoglobin soon appear. Aniline acts on the blood like ammonia and phosphoretted hydrogen, decomposing the hæmoglobin. Nitroaniline acts partly like aniline and partly like binitrobenzol. The sulphate of aniline always decomposes the hæmoglobin, hæmatin being produced, the peculiar absorption bands of which can be seen with the spectroscope, either in the blood of animals poisoned with it, or in blood to which it has been added outside of the body. The chemical action of nitro-glycerine upon the blood pigment is analogous to that of nitro-benzol, and their toxic action is about the same, three grains sufficing to kill a dog of moderate size in two or three days. Nitric and sulphuric acids act on the blood in a somewhat similar manner to the nitro-compounds, the pigment being decomposed and the hæmatin spectrum produced, an effect which is not caused by hydrochloric or phosphoric acids.

Thus the action of many of the organic nitro-compounds is evidently due to the radical nitryl which they contain, as nitro-glycerine, and the poisonous action of nitro-benzol cannot be due entirely to the formation of aniline within the system, as has been stated by some writers.

Analysis of Tobacco Smoke.—The analyses made by EULENBERG and VOHL *(Ann. d'Hygiène,* April, 1873, from *Vierteljahrsch. für ger. Med.)* upset all of the old theories, that the injurious effects of tobacco smoking are due to the presence of nicotia in the smoke. The smoke from tobacco in pipes and cigars was passed first through a solution of potassic hydrate and then through one of dilute sulphuric acid. The former solution was found to contain a mixture of carbonic, hydrocyanic, sulphuric, acetic, formic, metacetonic, butyric, valeric and carbolic acids, creasote, and several hydrocarbons. The acid solution contained rosalic acid, ammonia, traces of ethylamine and many of the pyridine bases, to the last of which the injurious action is due. The bases found were pyridine C_5H_5N, which is more abundant in pipe than in cigar smoke, picoline C_6H_7N, lutidine C_7H_9N, collidine $C_8H_{11}N$, which is more abundant in cigar than in pipe smoke, parvoline $C_9H_{13}N$, coridine $C_{10}H_{15}N$, rubidine $C_{11}H_{17}N$, and a residue corresponding to viridine $C_{12}H_{19}N$. As will be seen, the more volatile of the bases, as pyridine, were most abundant in pipe smoke, while the less volatile, as collidine, were most abundant in cigar smoke.

The physiological action of these bases was not tested separately, but only that of a mixture of those which volatilize under 160° C., and of those which volatilize between 160° and 250° C. Both of these sets of bases, like nicotia, produced contraction of the pupil, difficult respiration, general convulsions and death; and, upon post-mortem examination, the respiratory passages and lungs were found congested. They do not act as rapidly as nicotia. Those volatile at a low temperature were more active than those which were only volatile at a high temperature, which explains the fact that a larger amount of tobacco can be smoked in the form of cigars than in a pipe.

Bases produced by the combustion of the dandelion, willow wood, stramonium and pure picoline obtained from Boghead coal were also tested, and found to differ in degree only from the action of the tobacco bases, the vapor of pure picoline being poisonous, and producing great irritation of the respiratory passages, slight convulsions, and death.

From the results thus obtained, the authors think that the action of opium, when smoked, is not due to its natural alkaloids, but to similar combustion products, the variation in the action of the opium and tobacco smoke being due to the production of different bases in the two cases.

Reports of Medical Societies.

ESSEX NORTH DISTRICT MEDICAL SOCIETY. MORRIS SPOFFORD, M.D., SECRETARY.

Chronic Inflammation of the Uterus.—Dr. Carleton, of Lawrence, after giving the history and symptoms of the disease and the prevailing views of its pathology, expressed doubt whether it is possible to make a distinct differential diagnosis, which would be at all certain, between the disease affecting the mucous membrane alone, and that involving the parenchyma of the organ. For practical purposes it is sufficient to separate the disease at the internal os, treating it either as inflammation of the neck, or of the body of the womb. The introduction of the sound is the crucial diagnostic test between these two conditions. The prognosis is much more favorable in the former than in the latter case. In treatment, regard must be had to constitutional and hygienic measures, but local treatment is the *sine qua non*. The methods of local treatment in use were described, but the application of astringents and caustics in solution by means of cotton rolled upon the uterine probe, is to be preferred. Previous to this application, the complete perviousness of the canal must be secured, by means of sponge tents, if necessary; and the pressure produced by the sponge upon the diseased tissue is often of much benefit. Pessaries are sometimes of use when the uterus is retroverted, but this instrument, like all useful means of treatment, is liable to much abuse. Pregnancy is often of much benefit to a diseased uterus, if care be taken during convalescence, that perfect involution of the organ be secured.

The Laryngoscope.—Dr. F. I. Knight, of Boston, present by invitation, made some remarks on the use of the laryngoscope in general practice. He said that all physicians would admit the importance of inspection of a part supposed to be affected, and yet very few had adopted the use of the laryngoscope. This he attributed partly to the difficulty of acquiring the art of using the instrument without some special instruction, and partly to the confusing multiplication of varieties of instruments, which discouraged one from undertaking the use of any of them.

Dr. Knight said that he hoped that his remarks and demonstrations would induce some of the members to use the laryngoscope, at least for the purpose of diagnosis. One must not expect to operate within the larynx, except after long and patient practice. Before showing the use of the instrument, Dr. Knight said that he would refresh their knowledge of the anatomy and physiology of the larynx, by showing them some dissections, one of the cartilages of the larynx and trachea with their ligaments, and another of the muscles of the larynx. He also showed a beautiful section of the skull, showing the posterior nares, soft palate, lateral walls of the pharynx, and the larynx in situ. He gave briefly the action of the different muscles during respiration and phonation, as now generally understood. He then showed the best form (Türck's) of head reflector, and laryngeal mirror, and demonstrated, upon some of the members of the society, the proper method of using them.

THE TREATMENT OF MALIGNANT PUSTULE.—Dr. Belles has had an exceptionally large experience, as well as a remarkable success, in the treatment of malignant pustule, living in a district of Portugal where large herds of cattle are raised. His method of treatment consists in making a crucial incision across the whole diameter of the gangrenous lozenge, and then cauterizing the incisions with chloride of antimony; the cauterization to be continued till blood ceases to flow. This operation inflicts no pain, inasmuch as the gangrenous part is completely insensible, and may be freely laid open without the administration of an anæsthetic. In cases in which the incision and cauterization have been put into practice late in the disease, and where the disorganization of the tissue is far advanced, the elimination of the gangrenous eschar which results from the operation is retarded by a local atony of the parts. This can be met with success by the applications of hot cataplasms soaked in wine.—*The Clinic*, May 24, 1873.

METHOMANIA.—Dr. C. B. Gilbert, in an article under this title, observe. (*Detroit Rev. Med.*, June, 1873):—

"The influence of psycho-therapeutics is too tardily acknowledged, and too infrequently practised. It seems almost incredible that a man could, by mere self determination, resist the destructive power of rabies, when it has once invaded the system to such a degree as to cause constriction of the throat and difficulty of swallowing. But this incredibility will lessen when it is consideaed that a mental influence potent enough, acting *ab initio*, to produce a given disease, may also arrest it.

"This truth is forcibly illustrated by the case of Mr. Crosse, who was severely bitten by a cat. Three months afterwards, he was attacked by rabies; and, looking the disease squarely in the face, he determined to throw it off; so, taking his gun, he went in search of game; though finding none, yet every step was accompanied by a mental resolve that he would not succumb to the disease. On returning home at evening, he felt much better, and in the course of a day or so was quite well."

Bibliographical Notices.

A Handbook of Medical Electricity. By HERBERT TIBBITS, M.D., L.R.C.P. Lond. Philadelphia: Lindsay & Blakiston. Pp. 160.

DR. TIBBITS's Handbook certainly deserves a welcome from the medical public, to which it is addressed, and we entirely sympathize with the author in the hope that it will do something towards making every medical man acquainted with the fundamental principles of electro-therapeutics and the use of electrical instruments. That accomplished, the next step will be to do the same for a body of professional nurses, who shall take the details of application off the hands of the busy practitioner, who, otherwise, could make no more use of electricity than now.

The first part of the book is taken up with descriptions of instruments, all of foreign make, and for which we have excellent substitutes on this side of the water. The second part treats clearly and thoroughly of the details of the application of electricity, the choice of electrodes, &c., and it is in this chapter especially that the influence of the teachings of Duchenne are seen, whose chief work, "De l'Electrization Localisée," Dr. Tibbits is well known to have recently translated.

A few pages might have been added, to advantage, to the chapter on the diagnostic uses of electricity, which comes next, in order that the reader might be left with clearer notions of the important differences, in respect to the electrical reaction of the nerves and muscles, between paralyses of cerebral, spinal and peripheral origin.

Furthermore, other observers do not bear out Duchenne and Dr. Tibbits in the statement that, in cases of rheumatic paralysis of all other nerves except the facial, the electrical reaction of the nerve and muscle does not diminish.

The last part of the book, which is devoted to electro-therapeutics and electro-physiology, is instructive and interesting, but suffers from too much contraction, especially when electro-physiology is the theme.

The best class of unbelievers in such matters as these are best converted by scientific arguments, which, in this case, are not so numerous but that all of them might find a place even in a handbook. He says, for example, p. 109, that "Benedikt *contends*[*] that the voltaic current will *directly* affect the brain and cord," whereas certainly after the experiments of Erb, Burckhardt and Ziemsen, this is no longer to be considered as a point of contention, but as an established and important fact.

Dr. Tibbits, as well as Dr. Russell Reynolds,[†] speaks in high terms of the use of frictional electricity in certain cases (hysterical aphonia, some forms of tremor and neuralgia), and the former recommends charging the patient with positive electricity from the voltaic (galvanic) battery, a mode of treatment which is entirely new to us here.

Some excellent plates, copied mostly from Duchenne's work above alluded to, are printed in the text.

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[*] Italics are ours.

[†] Lectures on the Clinical Uses of Electricity. Lindsay & Blakiston.

An Appeal to Physiologists and the Press. By H. Freke, M.D., &c. Dublin. 1862.

The Dependence of Life and Decomposition. By Henry Freke, M.D., &c. Dublin. 1871.

The author of the above pamphlets is one of those writers who attribute all adverse criticism of their works to malicious persecution on the part of their reviewers. Dr. Freke having published, in 1848, certain views on organization and life, his critics were not slow in pointing out their want of novelty, while admitting that the treatise would be read with interest; "new relations being developed among ideas that were previously familiar, and various suggestions being thrown out which may be profitably pursued." Exasperated at this reception of his labors, and failing to obtain satisfaction from the medical press, Dr. Freke published his "Appeal" in 1862. To this he adds a postscript, in 1872, addressed "to the physiologists of America," being induced thereto by an intimation that active measures have been adopted by his persecutors "to render as abortive in America anything I may hereafter publish as my former publications have been already so rendered in England." He also informs us that one of his former critics, whom he compares to "an assassin who has once inflicted a stab in the dark," "is at the present moment (Oct., 1872) traversing the United States of America." Suspecting that this gentleman may make an effort to ruin his reputation as an author in this country, he appeals "to the generosity and sense of justice of American physiologists against such cowardly, assassin-like persecution."

To decide upon Dr. Freke's claim to originality is not altogether easy. From an examination of his views as contained in the pamphlets before us, it would seem that he has done little more than clothe old ideas in new language, but the vague and abstract terms which he employs and the absence of all concrete illustrations of his meaning render it difficult to pronounce with certainty upon this point.

Should Dr. Freke venture upon further publications, as he intimates his intention of doing, it is to be hoped that he will bear in mind a fact which he has thus far seemed strangely to forget, viz.: that questions such as he discusses, can only be settled by careful and close reasoning applied to *observation and experience.* B.

BOOKS AND PAMPHLETS RECEIVED.

The Local Use of Tar and its Derivatives, including Carbolic Acid, in the Treatment of Skin Diseases. By L. D. Bulkley, M.D. Reprinted from Dr. Brown-Séquard's Archives. Philadelphia: J. B. Lippincott & Co. 1873.

The Spectroscope and its Application. By J. Norman Stockyer, F.R.S. London and New York: Macmillan & Co. Pp. 117. (From the Publishers.)

Strictures of the Urethra. Results of Operation with the Dilating Urethrotome, with Cases. By F. N. Otis, M.D. (Re-printed from the New York Medical Journal.) 1873. Pp. 20.

On the Influence of Age on the Causation of Skin Disease. By Balmanno Squire, M.B. London: F. & A. Churchill. 1873. Pp. 4. (From the Author.)

Abstracts and Intelligence.

ADHERENT PLACENTA RETAINED THREE WEEKS WITHOUT PUTREFACTION.—Specimen exhibited before the Morgan County Medical Society, with remarks, by DAVID PRINCE, M.D., Jacksonville, Ill.—The report of Dr. H. Wardner, of Cairo, in the number of *The Examiner* for March 15, induces me to report the following case, in which the placenta maintained its attachment and its vitality for three weeks from the time of the expulsion of a five months' fœtus.

Mrs. M., of hysterical temperament, but corpulent habit, mother of several children, patient of Dr. H. Jones, became unusually large after conception, and continued to have sanguineous discharges with the return of each monthly period. Doubt was thus thrown upon the nature of the case until one morning, going across the yard for what the patient supposed a call for urinary evacuation, a sudden pain seized her, and a fœtus was expelled. Grasping this through her clothing she walked back into the house and placed herself upon a lounge.

Owing to the sickness of Dr. Jones, the care of the patient was imposed upon me. About half an hour after this catastrophe, the fœtus was found attached by the umbilical cord, but a very slight force detached the cord so that the best guide to the placenta was unfortunately lost.

The uterus was explored with a placenta forceps, and none being found it was supposed that it must have been expelled and thrown away unobserved. The patient rapidly recovered and walked about the house, supposing that all trouble had passed by.

Just three weeks from the time of the abortion, this lady was overtaken by a profuse hæmorrhage which subsided spontaneously. The horizontal posture was carefully maintained, and ergot was given. In a few hours a placenta, with its membrane complete, only showing a rent, was expelled in connection with coagula.

There was no more hæmorrhage; and though the skin was very pale from loss of blood, the recovery was speedy and complete. The placenta was altogether free from putridity; was compact, and destitute of apparent disease. One margin was dark with the presence of coagula, indicating the probable fountain from which the blood had gushed.

The location of the placenta upon the inner uterine surface cannot be certainly made out; but it is probable that it was so far toward the neck that the margin was detached by the expansion of the uterus with each monthly congestion.

It is possible that, in connection with the monthly hæmorrhages, there may have been such a change of the uterine surface of the placenta as to destroy the line of cleavage.

If the stem of a leaf is wounded just at the line at which it will subsequently separate from the branch, it may readily be conceived that the healing process may obliterate this line of separation, so that the leaf, instead of falling off at the proper time, will maintain its vitality for a long period, and perhaps finally shrivel up without separation.

The change which occurs in the leaf-stem may occur in the embryo-stem, permitting its base, the placenta, to maintain its vitality for several weeks after the falling of the embryo-leaf.

Dr. Hodge, in his folio work on Obstetrics, says that there is abundant proof that the placenta has adhered and maintained its vitality for weeks and even for months after the expulsion of the fœtus.

One of the practical inferences from this case is that it is not imperatively necessary to remove an adherent placenta by forcible means. Like the base of a polypus, it may be left to shrivel and separate by a natural process, which saves the uterus from the infliction of laceration and contusions.—*Chicago Medical Examiner*.

TRANSFUSION OF BLOOD.—This operation has been performed recently in London in two cases, both with a certain measure of success. The first case was one of leukæmia, under the care of Dr. Andrews, at St. Bartholomew's Hospital; the second operation was performed on a purpuric girl, a patient of Dr. West, at the Hospital for Sick Children, who was dying from loss of blood. The operation in the first patient was successful, and will probably be repeated once, at least, in the course of the next month or two; while in the other case, though terminating fatally a few hours after the operation, the patient was undoubtedly temporarily, and almost against hope, relieved by the adopted means.—*British Medical Journal.*

Correspondence.

CLIMATE OF DENVER, COLORADO.

MESSRS. EDITORS,—Dr. H. Norton, of Detroit, Michigan (*Detroit Review of Medicine and Surgery*, September, 1872), submits the enclosed* general observations concerning the climate of Denver, the result of a residence of two months in that city, April and May, 1872.

Denver is situated at the junction of Cherry Creek with the South Platte, in latitude 39 deg. 40 min.—5,317 feet above the sea level. Now, as regards the Doctor's account of this new city, he commences his article by stating that the brilliancy of the light is very disagreeable to those having a very sensitive retina, often necessitating the use of colored glasses. As to the above, the objection is not more common to Colorada than to any open country; less so, indeed, than in Kansas, Nebraska or Iowa. In the two latter States, I have practised seven years, and in Denver eleven years, so that I may, perhaps, judge more correctly of facts than Dr. Norton, whose residence in Colorado did not exceed two months. He also stated that the diminished atmospheric pressure so affects the physical condition of the eye that there is required an increased power of accommodation. This statement has no foundation, and is apparently a peculiar theory of the Doctor's, when men in their endeavors to hatch up something fall into a bad way of wandering.

Again, he says: the city having on one side an immense plain to be heated by the sun's rays, and on the other a lofty range of mountains covered with perpetual snow and ice, great and sudden changes frequently occur. In the summer months, when the sun is brightest and the heat greatest, very little snow and ice can be seen on the great range west of Denver. In July and August there is but little rain, and the heat is never excessive—unless occasionally in the middle of the day. Even then, Denver has this peculiarity, that the heat is only felt under the direct rays of the sun. Indoors, or in the shade, it is always cool and fresh. Upon this point I insert the following government record for 1870, 1871 and 1872, which is mathematically correct, and therefore conclusive. Also, an article taken from one of the daily newspapers of Denver in relation to the climate of this city during the last winter.* Even in midsummer, the nights are so cool that a blanket is almost always necessary, which cannot be said of the Eastern, Middle or Western States.

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* We do not re-print this, as the various points are made out with sufficient clearness in the letter.—EDS.

During the heated period, Dr. Norton says that cold winds, called sand storms, are frequent, so that persons riding any distance from home for pleasure are obliged, even in midsummer, to take with them thick garments and wrappers in case they be surprised by one of these winds, or else they run the risk of being dangerously chilled. Who told the Doctor so? Or did it emanate from the same false theory with which he started? Indeed, the assertion has no foundation or truth in it whatever, which every old or new inhabitant of Denver can asseverate. We have, without doubt, wind storms, which reduce the temperature several degrees; but never to the extent of chilling either the weak or the strong, by any sudden reduction of a previously warm temperature. As a rule, these wind storms do not last over five or ten minutes, after which everything is as calm as if nothing had occurred. Before persons can get their coats or cloaks well on, everything is over.

Winter (according to the article in question) commences as early as the end of September, and, some years, continues as late as the first of May, being a season of bright sunshine, clouds, rain, hail, snow and wind, while the mercury at times sinks as low as 42° below zero. To use a phrase more pointed than elegant, the above story seems to have been made out of whole cloth.

We very seldom have any winter before the 25th of December or 1st of January. It is true, we have, at times, snow-falls in the month of November, but they are always slight, and the snow seldom lies on the ground more than a day or two. As for rain or hail, it is very rare indeed; and never in the recollection of the oldest inhabitant has the thermometer been known to fall as low as 42° below zero. If Dr. Norton had stopped after the words "bright sunshine," he would have been within the bounds of truth, and have fairly described the average Colorado winter.

Nasal catarrh is not an indigenous disease of this climate. Most of the cases here are, like consumption, imported, generated in such a climate as Michigan, Illinois, Indiana, Ohio, New York and the New England States. The scabs that the Doctor speaks of in cases of catarrh are the result of the dry atmosphere; rather curative than otherwise, if the patient looks after his nostrils and applies cold water locally and each day. The number of cases cured here, compared to that of those in the more humid climate of the States, I can safely say is as three to one.

The curative effects of a residence in Colorado, in spasmodic asthma, are rapid and truly miraculous; if not at Denver itself, in the higher altitudes of

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* We have space only for some extracts:—

		Temperature.		
		Highest.	Lowest.	Mean.
1870	June	94°	48°	68·2°
	July	98	53	74·2
	August	97	45	64·8
1871	June	97	56	74·9
	July	97	58	78
	August	95	54	75·2
1872	June	97	49	69
	July	93	54	71
	August	94	52	72

In December, 1870, the lowest temperature was -18°, and in January, 1872, -26°; in no other months during the three years was it below -9°. The mean temperature in winter is apparently about 30°.—Eds.

the mountains in its vicinity. This holds good even in those cases where there is a complete emphysematous condition of the lungs, if the patient will stay long enough to allow the climate a fair trial.

Also, cases brought on and aggravated by organic disease of the heart, uterine derangements and nervous prostration are, as a rule, cured, the few exceptions being hardly worth taking into account. In regard to chronic bronchitis and consumption, I must say that many have come here to die, and why? Because their last days are upon them, and they are ready, like a drowning man, to grasp at a straw. However, if they come here in time, either in the first stage of the disease or with only the predisposition thereto, they will, in the vast majority of cases, be cured. Even if patients come here in the second stage of phthisis, they will live longer, and with less suffering, than it is possible for them in the States. I never, however, advocate the coming here of those who are almost *in extremis*—even though it may be true that they will here pass away with less suffering and greater ease than in the East. The journey is too great, with its necessary fatigues, and the promises in such cases are without foundation; although there is often a slight gain for a short season.

Dr. Norton says that the coming into this high altitude is especially dangerous for those who have disease of the heart.

It is, I believe, patent that high altitudes are not favorable to organic disease of the heart. Nor has this climate ever been advocated for these cases.

Dr. Norton also mentions, in his article, that acute rheumatism is very prevalent in this climate. According to the experience of the practitioners of Colorado, this statement is quite erroneous. Rheumatism is much less frequent here than I have found it in Ohio and Iowa, in both of which States I formerly practised—in the former six years and in the latter seven years—while in Colorado I have practised eleven, always having a large run of patients. If there is any form of rheumatism more prevalent here than in the States, it is a sub-acute form, generally localized in some joint or limb, and without swellings.

As for the two or three quoted cases of congested kidneys, with albuminuria, due to sudden changes of air, if the Doctor had been a close observer he would, without doubt, have learned that they were cases sent here from the States to seek a cure in our healthy climate.

Finally, came the most remarkable statement, that the high altitude of Colorado seems eminently suited to persons of apoplectic tendencies. We should here be glad of an explanation. Perhaps we are behind the times, and ignorant of recent advances in medicine. He speaks of the climate as being prostrating instead of tonic, and that a quantity of stimulants can be borne here greatly in excess of what is tolerated in the East.

The Doctor speaks of the so-called mountain fever, a species of remittent, with typhoid tendencies, of frequent occurrence, and sometimes fatal. If Dr. Norton thinks this fever remittent, let him come here and try the effect of quinine upon it, which is acknowledged to be the sheet-anchor in the treatment of such a disease. Let him judge from his own success, and he will be obliged to say, instead of "sometimes fatal," "always" so.

This "mountain fever" is a pure type of typhoid, the same as is found in any of the New England States, and requires the closest watching to save the patient. The average mortality is 75 per cent. Yet it is not so common as the article of which we speak would seem to indicate. Some years, very few cases occur, and again it is more prevalent. New comers are the persons most liable to it; the complete changes in air, living—i. e. food and water—and perhaps excessive use of liquors, seeming to lead to it. The older inhabitants are seldom attacked.

In conclusion, let us speak of one of the *virtues* of Colorada, and, indeed, a very great virtue. I refer to the entire relief which this Territory affords to patients suffering from "Hay Fever," or "Hay Asthma," as it is sometimes called—a disease noted for its obstinate and yearly return. Vide a former communication, this JOURNAL, Jan. 30, 1873.

W. F. MCCLELLAND.

Medical Miscellany.

ON July 5th, ninety-four persons were arraigned at the Municipal Court of Boston for drunkenness.

IN Boston one cannot sell beer and can sell oxalic acid. In Vienna, one cannot sell poison and can sell beer. We send schoolhouses to Vienna.

"SMART.—An American paper says, 'Massachusetts is noted for two things: intelligence and patent medicines.' We presume the intelligence is displayed in selling, not in taking, the physic."—*Fun.*

WE are sorry to learn that the female students at Zurich, of whom we have had such glowing accounts, are too immoral even for Russia, who has recalled her daughters to be redeemed by home influences.

THE celebrated anatomist, Professor Hyrtl, exhibits a series of his preparations in the International Exhibition at Vienna. Of two series which he exhibited at the London Exhibition in 1862, and the Paris Exhibition in 1867, one was bought by an American university.

MEDICAL REGISTER AND DIRECTORY OF THE UNITED STATES.—Circulars desiring information of individuals and institutions are being sent out. The Directory of the first eleven States and Territories is already with the printer. Information should be sent to S. W. Butler, M.D., 115 S. 7th St., Philadelphia, Pa. We hope the circular will receive due attention.

A LAUDABLE EXAMPLE.—The authorities of Leon in Spain have, on the suggestion of Dr. Siso y Ruiz, included in their public estimates for the year the sum of 1,000 pesetas (£42), to be applied in the purchase of vaccine lymph, which will be distributed through the province, with the object of insuring the vaccination of the poor to as great an extent as possible.—*London Medical Record.*

WE have some other works on our table which we are for the present unable to notice at length. Of these, we would mention with approval the new *Report of the Massachusetts State Board of Health*, which teems with information of great value to all sanitarians. The manner in which the medical officers of that Board carry on their investigations deserves our warmest praise. The inquiry into the origin of consumption in this instructive blue-book is an example of this.—*The Doctor.*

CHOLERA AND QUARANTINE.—The following questions are proposed for discussion at the International Medical Congress, to be held in Vienna:—1. Does the present state of our experience show that measures of separation and quarantine are effective and worthy of being recommended? 2. Where and in what form should quarantine regulations come into force, and what international combinations should be formed for this purpose? 3. What is the value of disinfection, and what means of disinfection should be recommended for general use?—*London Medical Record.*

AT the Pathological Society of Dublin, Mr. Edward Hamilton, in the absence of Mr. Bookey, showed a tumor from the abdomen of a woman, aged about 60. It occupied the right lumbar region, resting on and causing atrophy of the psoas muscle. It consisted of the capsule of the right kidney in a state of extreme adipose hypertrophy. A large calculus was imbedded in the pelvis of the kidney. The ureter and bladder were healthy, and the other kidney was perfectly normal. The mass weighed 1 lb. 6 oz. and 2 drs. No other abnormal development of adipose tissue was met with in the body.—*British Medical Journal.*

ADVICE "TO THE LADIES THEMSELVES," on their application for "mixed classes" at Birmingham; by the *London Medical Times and Gazette*, June 7th, 1873:—

"We have always, in this journal, recognized your right to make yourselves acquainted with anatomy, physiology, surgery, medicine and obstetrics, if you please; and to practise medicine if you can prove yourselves qualified to do so. We do not think you are wise in wishing to do so, but you have the right to form your opinion on this point. But society has its rights as well as yourselves, and it is an outrage upon common decency that you should study these subjects in the company of young men. If you are determined to be surgeons and physicians, you can only become so with a due regard to public propriety and decency by establishing your own educational and examining institutions."

And may we not also add, *your own medical societies ?*

A CASE OF HYDROPHOBIA.—An inquest was held last week at Hampstead, by Dr. Lankester, on the body of Mrs. Revitt, aged 29, who had died of hydrophobia. The husband of deceased, a butcher, said that one Saturday morning, a few weeks ago, he left home about six o'clock to attend market, leaving the door leading from the shop to the staircase ajar, so that his wife could hear when the shopman arrived. On his return, his wife told him that she was awakened by a slight noise, and saw a dog licking the face of a child which was asleep in a crib by her bedside. She tried to drive the dog away, and it bit her hand. She then seized the dog, carried him to the window on the second-floor landing, and threw him out into the yard. Dr. Cooper Rose stated that he attended the deceased on the morning the dog bit her. She had a lacerated wound on the left thumb and scratches about the hand, which he cauterized. The wound healed up, but the thumb was torn under the nail, and was very troublesome. On Saturday week last he was again sent for, but did not exactly know what was the matter, but on the following day the symptoms were fully developed. She died from hydrophobia. The jury returned a verdict in accordance with the evidence, and desired the coroner to forward to the police authorities a requisition, calling their attention to the large number of stray dogs, which are a source of great and increasing danger to the public, in order that the necessary steps may be taken to put an end to the danger and nuisance.—*British Med. Journal.*

MORTALITY IN MASSACHUSETTS.—*Deaths in fifteen Cities and Towns for the week ending June* 28, 1873.

Boston, 102—Charlestown, 15—Worcester, 19—Lowell, 8—Milford, 2—Salem, 12—Lawrence, 11—Lynn, 16—Gloucester, 15—Taunton, 2—Newburyport, 1—Somerville, 4—Fall River, 18—Haverhill, 2—Holyoke, 12. Total, 239.

Prevalent Diseases.—Consumption, 33—cholera infantum, 14—pneumonia, 13—scarlet fever, 10.

Holyoke reports six deaths from smallpox.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, July 5th, 163. Males, 81; females, 82. Anæmia, 1—accident, 6—apoplexy, 2—disease of the bladder, 2—inflammation of the bowels, 1—bronchitis, 4—congestion of the brain, 2—disease of the brain, 6—burned, 1—calculus, 1—cancer, 3—cholera infantum, 19—consumption, 26—cyanosis, 3—cerebro-spinal meningitis, 4—convulsions, 1—debility, 2—diarrhœa, 2—dropsy, 1—dropsy of the brain, 3—diphtheria, 1—erysipelas, 1—exhaustion, 1—scarlet fever, 9—typhoid fever, 5—gastritis, 2—disease of the heart, 5—intemperance, 1—disease of the kidneys, 2—disease of the liver, 2—congestion of the lungs, 1—inflammation of the lungs, 9—measles, 2—old age, 5—premature birth, 3—puerperal disease, 1—paralysis, 2—pyæmia, 1—peritonitis, 2—rheumatism, 1—suicide, 1—scrofula, 1—sunstroke, 2—tabes mesenterica, 3—unknown, 11.

Under 5 years of age, 61—between 5 and 20 years, 27—between 20 and 40 years, 33—between 40 and 60 years, 21—over 60 years, 21. Born in the United States, 111—Ireland, 34—other places, 18.

THE

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Original Communications.

CASE OF EXTRA-UTERINE FŒTATION.

By Joseph Garland, M.D.

Read before the Obstetrical Society of Boston.

The following case of extra-uterine fœtation, occurring in the person of Mrs. H. C., resident of Gloucester in this State, has so many points of interest that I beg leave to report it.

Mrs. C., æt. 32 years, had been married about nine years and was the mother of two living and healthy daughters, aged, respectively, seven and eight years. Had aborted with a three months' fœtus two years subsequent to the birth of the last child. Health good, thereafter, and menses regular up to April 4th to 10th, 1871. Menses did not appear at their regular period in May, but did occur twice during that month; also, in June and July, at irregular intervals of one and two weeks, lasting from one to four days at each occurrence. Had nausea and vomiting about the last of May, giving first suspicions of pregnancy. Menstrual discharge entirely suspended about the last of July. Near the termination of the last menstrual flow, excruciating pains were experienced in lower part of abdomen, described as "violent cramps," called "colic," by the physician in attendance; lasted several hours; were very prostrating, and relieved only by opiates. Was rarely free from pain and very great discomfort after the attack above-mentioned. Experienced greater soreness of bowels and more obstinate constipation than ever before, when pregnant.

Fœtal life was first felt about the last of August. From this time, gestation went on, without any occurrence of special note, till January 6th, 1872, which was about the date of expected labor. At this date, slight pains were felt in back and lower part of abdomen. Speedy delivery was anticipated. Pain, however, did not become more severe, and lasted only a few hours.

January 12th.—A rapid and vigorous movement of the fœtus occurred on this day, lasting but a few minutes; and, thereafter, all motion entirely ceased. Slight uterine discharge of a dark bloody character was noticed, also, at this date.

There being no recurrence of pain, or symptoms of labor, and no motion of fœtus apparent for more than a week, anxiety was felt, and a messenger despatched to consult me. It was suggested that a mistake had been made in the "reckoning"—that a few days might yet be wanting to complete the full period of gestation. Patience was, therefore, recommended.

January 30, 1872.—Another week had passed without any change apparent. I was called and found Mrs. C. about house and quite comfortable. Expressing doubt as to the accuracy of her "reckoning," I was assured there could be no mistake, for the period of "quickening," which was specially noted by her, was just 4 1-2 months from the day she recovered from her last regular menses, April 10, 1871, and that the remaining 4 1-2 months should have ended somewhere between the 10th and 20th of the present month, January, 1872.

Palpation of abdomen gave a large, rounded tumor, centrally located, reaching from the pubes nearly to the ensiform cartilage, and occupying the whole abdominal cavity; about the size of the uterus, generally, when containing a fœtus fully developed; somewhat flaccid and less resistant on pressure than the uterus containing a living fœtus. The stethoscope gave no fœtal sounds. Digital examination, per vaginam, gave an os uteri quite constricted and somewhat angular in the direction of its opening, a cervix not obliterated, but, on the contrary, of the usual length and size in the unimpregnated state. Passing the finger above the posterior lip into the "cul de sac," a large, somewhat rounded surface was perceptible to touch, apparently connected with and diverging from the cervix uteri. Sudden pressure made upon this was felt by the hand upon the abdomen, moving the tumor beneath it very sensibly.

Notwithstanding the peculiar, unimpregnated feel of the os and cervix uteri, unaided by the sound, I dared not declare the case other than uterine pregnancy, and, consequently, suggested that it might yet terminate favorably.

February 19th.—Visited Mrs. C. again. Found her attending to her domestic affairs, and hopeful, though in a dilemma. No change, except slight diminution in size of abdomen. No symptoms of labor, whatever, since my last visit. Urged to do something. In the absence of all signs of fœtal life, I prescribed ergot.

March 14th.—Found abdomen a little more shrunken—tumor not rising to ensiform cartilage by more than one and a half inches. Had had no labor pains, though ergot had been taken freely.

Labor had been so long missed, and no signs of fœtal life apparent for more than eight weeks, exploration of the uterine cavity was now attempted. Sponge tents were employed, but distance from patient made it impossible to insert more than one in the 24 hours, consequently, success was small—the external os and cervix yielding only partially—the internal os still remaining undilated.

March 16th.—Quite dissatisfied with the progress made, and doubtful of my diagnosis, I determined to pass the sound at once, and explore. The sound entered, but passed the cervix and internal os with difficulty, the canal being unusually uneven and obstructed. Its further progress up the cavity was not free, but it seemed to impinge upon, and then pass by, something solid and impacted. It entered 2 1-2 inches, as per measure, on one of Simpson's sounds.

March 17th.—Patient passed a restless night. Had chills, headache and vomiting; pain in right iliac region, with great soreness upon pressure. Anodyne fomentations were ordered to bowels; opiate enemata; febrifuge mixtures; opium and calomel.

March 18th.—Pain and soreness more diffused, passing over to left iliac region; some nausea and vomiting; loss of appetite; frequent pulse and considerable heat. Tympanites was present, accompanied by those peculiar "*quadrupedante*" gurgling sounds so suggestive of peritoneal inflammation.

March 21st.—At this juncture, Dr. A. D. Sinclair, of Boston, was called in counsel. Pain and sensitiveness of abdomen had so far abated, that it was found possible to make a fair examination of patient, though not so complete as might have been desirable. The central position of the tumor in the abdominal cavity, the uniformity of its outline, the projecting points on pressure, the impulse communicated to it by sudden pressure made upon the os uteri, taken in connection with the general history of the case, led to the following result of consultation, viz.: That this was, undoubtedly, a case of pregnancy, and, probably, uterine; that the fœtus was dead; and that nature might yet prove competent to its removal. Patient delay was, therefore, advised.

A few days subsequent to the last date given above, symptoms of inflammation having nearly subsided, a severe and persistent diarrhœa set in. The size of the abdomen was rapidly reduced, and general emaciation and loss of strength became apparent. Nothing peculiar in the discharges was reported, except that sometimes they were a little bloody and slimy, till they had continued nearly three weeks, when, upon inquiry, they were described as very singular in appearance and singularly offensive. Upon inspection made April 24th, more than three months after time of expected labor, portions of the soft parts of a decomposed fœtus were discovered by me, passed, per rectum, by patient. Among them was a piece of intestine, ten inches in length; hair and shreddy portions of scalp and other dermoid texture; also, the body of a small vertebra. Two days subsequently, other bodies of vertebræ and an orbital piece of bone had escaped. The next day the left tibia was expelled, and, finally, a few days after, the left lower maxilla.

The sequel will show that nearly all of the soft parts and many of the smaller bones of a fœtus must have passed the rectum previously to my first examination of the discharges, the stupidity of the nurse in attendance not being equal to their recognition.

These portions of a fœtus discharged, per rectum, pointed to a diagnosis—rather, were leading to a prognosis. Digital examination was, therefore, made to ascertain, if possible, the orifice through which they were protruded into the rectum, and the direction of the opening. The lower margin of the orifice only could be reached, and that was found upon the anterior wall of the bowel. The feeble condition of the patient seemed not to warrant further disturbance; so the question as to which variety of extra-uterine fœtation this case belonged remained still unsettled.

From the date of the discharge of the last piece of bone, May 4th to May 20th, the day of her death, the patient suffered but little severe pain. Soreness was always present within the abdominal parietes. Loss of appetite and nausea were constant, and, notwithstanding the diarrhœa was nearly suspended and the most sustaining treatment pushed, she gradually failed, and, finally, gangrenous inflammation setting in, she sank into an unconscious state three days prior to death.

Autopsy, 18 *hours after death.*—Cadaver much emaciated; rigor mortis slight; skin of a jaundiced hue, except over lower abdomen which was livid in color; marked fulness of hypogastric region, most marked on the right of median line. The point of special interest being in this region, attention was directed to its examination. The integuments having been carefully removed, a dark and very thin muscular filament was found, covering a hard and somewhat irregular mass. Dissection seemed impossible, for the first touch of the knife penetrated the covering. Upon dilating the opening, a large cavity or sac presented, filled with fœtal bones and a dark pultaceous substance of the consistence and appearance of soft, dark putty. The large cranial bones formed the walls of this mass. The other bones and the soft substance filled the space between them. This mass was carefully removed and the cavity examined in situ, and from above. Its position was between the pubes and umbilicus, the superior part reaching the umbilicus, the inferior part extending downwards into the pelvis, and the anterior portion projecting furthest on the right side of the median line. The shape of this cavity was oblong rather than round—its longer diameter, 6 1-2 inches, extending downwards in the direction of the pelvic cavity—the shorter diameter, 5 1-2 inches, being on a line nearly parallel with the median line. The inner walls of this cavity or sac were ragged and sloughy, greenish brown, or black in color, and very fetid. No placenta or placental attachment was evident. Inferiorly and inclined to the right side and bottom of the cavity, lay the uterus, twisted upon its axis and retroverted to the right. Inferiorly and to left and a little posteriorly, a large, sloughy opening presented, surrounded by soft tissue. This opening communicated with the rectum. The wall of this sac was very thick and dense where connected with the uterus and the broad ligaments, and cut like uterine tissue; but anteriorly and superiorly, it was found agglutinated to the wall of the abdomen, to the omentum and the intestines, and in a gangrenous, sloughy condition. The bladder was slightly adherent to the sac, otherwise it was in its normal condition. The uterus, rectum and that portion of the sac not decomposed were removed for further examination. The os, cervix and the whole anterior half of the uterus to extreme point of fundus were found in nearly normal condition—the peritoneal surface only showing effects of inflammation. The posterior half of the uterus, which formed part of the base of the sac, was not in normal condition, its surface having undergone absorption and partial change of structure. This surface was continuous with the inner wall of the sac, which wall of sac took on the appearance of homogeneous tissue with the uterus. The right ovary and Fallopian tube could be identified, but were much changed in position and condition from inflammation of tissues. The left ovary could not be identified, and the left Fallopian tube could not be well isolated, owing to agglutination to the walls of the sac.

The cavity of the uterus was pervious, and, apparently, normal. The anterior wall was of normal thickness; the posterior wall, not so thick as the anterior wall, as indicated above. The rectum was in normal position, with reference to the cervix uteri, but above the cervix it was to the left and attached, by adhesive inflammation, to the posterior basal wall of the sac. Along the line of this attachment, an oblong, sloughy opening communicated, directly, with the cavity of the sac in which the fœtus lay. This opening was 1 3-4 inches in length, and from 1 inch to 1 1-2 inches in width—the lower margin being opposite to and on a level with the os uteri.

Inspection of the mass removed from the sac revealed nearly all of the larger bones of a fœtus, except those already mentioned as having escaped per rectum. Most of the smaller bones, carpal, tarsal, phalangeal and vertebral were missing. Such as were found, with an exception or two, I am able to produce. The soft material was made up, in most part, of the disintegrated and decomposed soft parts of the fœtus that had not escaped per rectum. Besides the bones, I have the satisfaction of being able to produce the uterus itself, with the sac also, so much of it, at least, as could be preserved; enough, however, I trust, to verify my statements and my conclusions.

In regard to the size of the fœtus, in evidence of its age and maturity, I give the length of the shaft of the femur, 2 3-5 inches; length of shaft of tibia, 2 1-4 inches. The epiphyses, together with their cartilages, were destroyed or lost from all the bones when first discovered and removed from the sac. Upon comparison of the femur and tibia and other bones of this fœtus with those of a fully grown nine months' fœtus in the Warren Museum, they were found quite equal to them, both in size and length, well establishing the fact that they belonged to a fully developed nine months' fœtus.

The pathology of this case is intensely interesting. Its consideration, naturally, gives rise to the following questions, viz.: What accident occurred to this ovum, that it should have been the cause of so much mischief? Where was it at the time of the accident, and what were its location and relations, subsequently? What connection had it, if any, with the uterus or generative system? Finally, when the perfect development of the embryo existence had been attained, and that existence proved a failure, what were the resources of nature, in self-preservation, for the removal of the offending body that threatened the integrity of her organization?

The length of this paper, already, will allow me to give these questions only a passing notice; I shall then be happy to leave them to be discussed, in their nicer points, by those better able to do it than myself.

The Graafian vesicle had burst, and the ovum, impregnated or ready for impregnation, had left, or was prepared to leave its primitive nidus, embraced by the fimbriated extremity of the left Fallopian tube. Had it entered the tube, impregnation was possible to it there. Once in the tube, its natural course was to have been transmitted along the lining membrane of the tube into the cavity of the uterus. But we are certain it never reached that cavity, else we should have had normal, uterine gestation, which facts controvert. Neither could it have entered and remained in the tube, for, in that case, we should have had tubal gestation, which, I think, cannot be satisfactorily demonstrated upon the specimen; for, though the track of the tube is sufficiently evident, there is no apparent dilatation of it sufficient to answer that supposition. Could it have become entangled in the interspaces of the uterine tissue, after having been transmitted along the tube to a point between the external wall and the termination of the tube at the internal or cavity wall of the uterus? I must confess this to have been the view I took of the matter when I first looked at the specimen, so evident was the lesion of the uterine tissue. But since reviewing the pathological appearances of the specimen with Dr. R. H. Fitz, of Boston, I fail to be satisfied with that solution of the difficulty. Could it have occurred in the ovary? This point may need further elucidation. But, as the ovary cannot be well identified or isolated from the walls of the sac, and, of course, no point of lesion in that body be detected, I cannot speak with any precision. The fact of a fully developed nine months' fœtus being found, would seem rather to antagonize, if not forbid this view.

The most correct, and the least difficult answer to the question of accident would seem to be this, viz.: That, being impregnated, the ovum dropped—from some physical or emotional cause—from the Fallopian tubal extremity into the peritoneal cavity of the abdomen, at the left side of the uterus; that, lying there and consequent upon impregnation, its membrana decidua was thrown out, probably attaching itself to the posterior surface of the uterus as well as to the peritoneal cavity in which it lay; that, as development went on and larger space was required, the uterus was pressed towards the right side of the pelvis, raised or anteverted and then twisted upon its axis, and, finally, almost completely retroverted, thus exposing its posterior surface to pressure from above, as the encysted embryo developed and rose up into the abdominal cavity; and, that thus, from pressure combined with other influences, the uterine surface was so acted upon as to have occasioned absorption and loss of its tissue, and caused its conformity to the other internal wall of the sac.

The question of dependence upon the uterus as the medium of the embryo development cannot be satisfactorily answered upon the specimen. I cannot see any reason, however, to contradict the probability of the attachment of the placenta upon the posterior wall of the uterus.

The last question—the resources of nature for the removal of the dead fœtus from its unnatural and offending position—is satisfactorily answered by the specimen. Gravitation and attrition, at the base of the sac, acting upon the most yielding tissue, the rectum, through the aid of inflammatory and absorbent action, accomplished all that could be done for the liberation of this "failure of nature." This process was partially successful, and, probably, would have been fully successful, had there not been a limit to the accommodating powers of nature in the human organization.

The literature of this class of cases, though exceedingly interesting, I have not time to enter upon. Allow me, therefore, simply to refer for some valuable information to this Journal, vols. 53, 55, 56 and 61; also, vols. 6 and 9, new series. In these volumes I find most of those cases noticed, which have occurred in this State, and many others of interest occurring abroad.

Gloucester, June 2, 1873.

NOTES ON THE PNEUMOGASTRIC.

By J. F. Alleyne Adams, M.D., Pittsfield.

Read before the Massachusetts Medical Society, June 3d, 1873.

In presenting to the Society a brief paper upon the functions of the pneumogastric nerve, and their bearing upon the etiology and treatment of certain forms of disease, a few remarks will be offered, by way of introduction, upon the anatomical relations of the pneumogastric to the other cranial nerves.

By the classification of Soemmering, the pneumogastrics constitute the *tenth* pair, and by that of Willis a portion of the *eighth*. The more scientific classification of Müller calls the pneumogastric, with the glosso-pharyngeal and spinal accessory, the *second* pair of cranial nerves, the third, fourth, fifth and sixth of Willis, with the portio dura of the seventh, being grouped together to form the first, while the hypoglossal is the third. This arrangement is more in accordance with the teachings of philosophical anatomy, inasmuch as it harmonizes the nerves with the vertebrate type of the skull, giving one pair for each of the three cranial segments. It leaves out of the question the three nerves of special sense, viz., olfactory, optic and auditory, which are demonstrated by Oken to have no true nerve structure, but to be mere outgrowths or appendages of the brain. But Müller's classification does not complete the homology between the cranial and spinal nerves, for the third pair has no sensitive root, and the distribution of both the second and third is greatly at variance with the anatomical relations of the vertebræ to which they respectively belong.

Dalton* proposes a fourth classification, which is identical with Müller's, excepting that the hypoglossal is put with the glosso-pharyngeal to form the second, while the pneumogastric and spinal accessory constitute the third. Although suggested by him on purely physiological grounds, this arrangement commends itself, as well, from an anatomical point of view; and there are strong arguments in favor of its adoption as the true classification of the cranial nerves.

These arguments may, for convenience, be arranged under the three following heads:—

1st. Origin. 2d. Distribution. 3d. Function.

1st.—*Origin.*—All of the cranial nerves, excepting the three nerves of special sense mentioned above, have their deep origin in the medulla oblongata, and are arranged in the following order:—from its upper portion arise, in close proximity, the trigeminus, the facial, motor oculi, abducens and patheticus; then comes the glosso-pharyngeal, next below which is the deep origin of the hypoglossus; below this is the vagus, and, lastly, the accessorius. Thus we see that the hypoglossus, although having its origin on the same level as the vagus, and anterior to it, really arises above that nerve, and close to the origin of the glosso-pharyngeus. Arguing from the deep origin, therefore, there is no propriety in calling the hypoglossus the last of the cranial nerves.

2d.—*Distribution.*—The several nerves grouped together as the first pair are distributed chiefly to the frontal segment, including its inferior or hæmal arch, the inferior maxilla. The second, or parietal segment, has for its hæmal arch the styloid processes and hyoid bone; and we find the glosso-pharyngeus and hypoglossus distributed to the tongue and pharynx, parts intimately connected with these bones. The third, or occipital segment, by an adaptation to special ends, has its hæmal arch separated from it, to form the scapular arch; and, accordingly, the third pair of nerves undergoes a similar deviation, the pneumogastric and accessorius being distributed to the whole respiratory apparatus, the heart and chylo-poietic viscera, while the spinal portion of the spinal accessory goes to the trapezius and sterno-mastoid muscles, which form the chief connecting links between the occipital vertebra and its hæmal arch.

3d.—*Function.*—The present classification makes the analogy of the cranial to the spinal nerves the more striking, in that it gives to each pair a sensitive and a motor root. Thus, the first pair has for its sensitive root the trigeminus, and for its motor the facial, of which the three motor nerves of the eye and the motor root of the fifth pair are mere accessories. The second pair has the glosso-pharyngeal for its sensitive, and the hypoglossus for its motor root, while the sensitive root of the third pair is the vagus, and the motor the spinal accessory.

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* Dalton's Human Physiology, p. 432.

Of the arguments that may be adduced in antagonism to this classification, the strongest is, that, in frogs, the hypoglossus is placed *below* the vagus, and becomes the first of the spinal nerves; although the deep origins of the two nerves, even in this case, have been shown by Vogt to be close together.* Another objection is, that the hypoglossus leaves the skull by the anterior condyloid foramen, which is posterior to the foramen lacerum posterius, which transmits the pneumogastric. Therefore, although both of these objections might possibly be ruled out, the arrangement is not to be accepted without due caution.

The pneumogastric arises, superficially, by eight or ten filaments, from the lateral portion of the medulla oblongata, behind the olivary body, between the roots of the glosso-pharyngeal and accessorius. Its deep origin is from a grey nucleus in the lower portion of the floor of the fourth ventricle. The nerve leaves the cranial cavity by the foramen lacerum posterius, within which is formed the ganglion of the root, the ganglion of the trunk being external to the cranium. The root of the pneumogastric is strictly sensitive, but its trunk is both sensitive and motor. Its motor filaments are derived chiefly from the accessorius, which unites with it just below the ganglion of the trunk, besides giving off some filaments to the ganglion of the root. It likewise anastomoses at the ganglion of the root with the facial and hypoglossal, and, at that of the trunk, with the hypoglossal and first two cervical nerves. Both ganglia are intimately connected by numerous filaments with the superior cervical ganglia of the sympathetic, while its trunk receives branches from the middle and inferior cervical and upper dorsal ganglia.

Thus constituted and reinforced at its origin, the par vagum is prepared for a distribution more extensive and functions more varied and remarkable than any other pair of nerves. Its functions may be briefly stated, as follows:—Its *sensitive* filaments are distributed, through the auricular, to the external auditory meatus and membrana tympani, through the superior and inferior laryngeal, anterior and posterior pulmonary, to the whole respiratory tract, through the cervical and thoracic cardiac to the heart, and through the pharyngeal, œsophageal and abdominal branches to the digestive tract.

Its *motor* filaments are distributed, through the pharyngeal and inferior laryngeal branches to the pharynx, through the recurrent laryngeal to all of the muscles of the larynx except the crico-thyroid, through the superior laryngeal to the crico-thyroid, through the recurrent laryngeal and pulmonary branches to the tracheal and bronchial muscular coats; and, through the œsophageal, gastric and intestinal branches to the muscular coats of the œsophagus, stomach, and the whole of the small intestine. Until the discovery of the intestinal branches by Kollman, in 1860, the abdominal distribution of the vagus was supposed to stop at the pylorus.

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* J. Wyman. Nervous System of Rana Pipiens. Washington, 1853.

The pneumogastric sends *secretory* fibres to the gastric and intestinal mucous membrane.

Its hepatic branches preside over the glycogenic function of the liver.

It also sends inhibitory or arresting fibres to the heart.

It transmits accelerating and inhibiting fibres to the centre of respiration.

It sends accelerating and inhibitory fibres to the vaso-motor centre, the latter being contained in the depressor nerve of Cym and Ludwig.

Without attempting to go over all of the ground here indicated, this paper will confine itself to the more recent discoveries concerning the relations of the pneumogastric to the heart, the lungs and the stomach.

Influence of the Pneumogastric upon the Heart.—Although the vagus supplies to the heart both centripetal and centrifugal filaments, its action upon this organ is not that of an ordinary motor nerve. On the contrary, it exerts an arresting or regulating influence. The rhythmical contractions of the heart are induced by an excitation derived from the cardiac ganglia of the sympathetic system, beautifully described and figured by Pettigrew, in the May number of the *Edinburgh Medical Journal* for the present year.* This system bears to the heart the same relation that the main-spring does to a watch, while the pneumogastric answers, in some sort, to the escapement. This influence is commonly known as the *inhibitory* action of the pneumogastric.

The subject of inhibition was first introduced to the profession in 1846 by the brothers Weber, who discovered that galvanization of the pneumogastrics in the neck rendered the action of the heart slow; and, if the current were sufficiently powerful, arrested the heart in diastole. Since then, numerous experiments have demonstrated the accuracy of their observations, and have added largely to our knowledge in this direction. The result of these experiments may be stated as follows:†—

If one of the pneumogastrics be divided in the neck, the frequency of the heart's pulsations is slightly increased and the cardiac pressure slightly diminished.

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* James Bell Pettigrew. On the Physiology of the Circulation. Edinburgh Medical Journal, January to May, 1873.

† Flint. The Physiology of Man. Vol. IV. Nervous System. 1872.

If both pneumogastrics are divided, the frequency of the pulsations is greatly increased, at least doubled, while the force is greatly diminished.

Galvanization of the peripheral end of the divided nerve retards or arrests the heart's action; but galvanization of the central ends produces no such effect, showing that the inhibitory influence is a centrifugal one.

If an animal be placed under the influence of woorara poison, which paralyzes motor nerves without affecting sensitive nerves or muscular irritability, and the pulsations of the heart be kept up by artificial respiration, galvanization of the pneumogastrics has no effect upon the heart's pulsations; whence we may conclude that the inhibitory power is located in motor filaments. This experiment has been tried by Bernard and verified by Flint.

The experiment has been performed by Traube of injecting digitalis into the veins of a dog with the pneumogastrics divided, without affecting the heart's pulsations; although, when this was done with the nerves intact, the number of beats was, in an hour, reduced to one-fourth of the normal number. This indicates that the sedative action of digitalis upon the heart is due to an irritation of the vagus, transmitted from the brain.

Irritation of the medulla oblongata produces the inhibitory action; but the irritation is conveyed, not by the root of the vagus, but, as has been demonstrated by Waller, by the accessorius.

Recently, it has been discovered that the right vagus possesses a more powerful inhibitory power than the left. "Dr. Massin states that, while the movements of the heart are stopped by a very powerful excitation of the left vagus, it is always possible, by sharply striking the heart with the finger, to reproduce the rhythmical movements; while this mechanical cause of action remains ineffectual when applied to the heart stopped by strong galvanization of the right vagus."*

The inhibitory influence upon the heart is also exerted in various reflex ways. Brown-Séquard† has found, in rabbits and guinea-pigs, that an irritation of the nostrils by carbonic acid or chloroform, or even by a sudden and gentle touch, will cause the heart to stop completely, or, at least, notably diminish its force and speed. Rutherford states that, if any irritating vapor be brought before the nose of a rabbit, it closes its nostrils and ceases to breathe, often for thirty or forty seconds. Within three seconds after the cessation of respiration, the heart comes almost to a stand-still, and continues to beat very slowly until respiration is re-established. Rutherford believes that "this arrest of the heart is due to stimulation of the inferior cardiac branch of the vagus by the asphyxiated condition of the blood"; but Brown-Séquard proves conclusively that this is not the case, but that the phenomenon is due to reflex influence.

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* Brown-Séquard. On the Sudden or Rapid Arrest of Certain Normal or Morbid Phenomena. Archives of Sci. and Pract. Med., Jan., 1873.

† Ibid. Most of the physiological facts in this paper are from Flint or Brown-Séquard.

The cold bath, especially the shower-baths or douche, has, by reflex action, the same inhibitory influence upon the heart. Fainting is even produced in some persons by this means, from complete arrest of the pulsations. Brown-Séquard states that, in Europe, where ice-water is not as habitually used as here, a stoppage of the heart's action is not rare, in the summer season, after the drinking of a large quantity of cold water.

Wounds of the abdominal viscera and blows upon the belly produce fainting or slowing of the heart's action. To Brown-Séquard we are indebted for the discovery that the crushing of the ganglions of the sympathetic in the abdomen stops or diminishes the movements of the heart; but if the spinal cord or vagus is divided transversely, the crushing can be made without any influence upon the heart.

Goltz has demonstrated, in the frog, that the heart can be brought to a stand-still by striking upon the abdomen, and that this paralysis of the heart can be prevented by a simultaneous strong irritation of the cutaneous nerves, which diminishes or abolishes the reflex activity.

It is asserted by Rouget, that the inhibitive action takes place in nerve-cells. He says:—"Wherever the excitation of a nerve is followed by an arrest of movement, nerve-cells are found on the nerve-fibres which transmit the excitation." In this view he is supported by Brown-Séquard, who thus describes the process of arrest:—

1. An irritation starts from a part of the nervous system radiating towards the nerve-cells, the activity of which is to be arrested.
2. A special influence is to be exerted by this excitation on those cells, arresting their activity.
3. The movements, normal or morbid, or other phenomena depending on the activity of those cells, cease at once when that activity ceases.

In the discovery of the *depressor* nerve by Cym and Ludwig, who first published an account of it in 1867, an important addition is made to our knowledge of the pneumogastric in its relation to the heart. This nerve was found in the rabbit, arising by two roots, one from the trunk of the pneumogastric, and the other from its superior laryngeal branch, passing down the neck, by the side of the sympathetic, to the chest, where, joining with sympathetic filaments, it passes to the heart by little branches between the origin of the aorta and the pulmonary artery. This nerve has since been found by Cym in the horse. In the rabbit it has been made the subject of a very complete and satisfactory series of experiments.

When this nerve is divided in the neck, and its *peripheral* end irritated by galvanization, no effect whatever is produced upon the heart or the circulation; but if its *central* end is galvanized, the pressure is diminished in the whole arterial system. This diminution is gradual, the pressure never reaching its minimum before fifteen pulsations of the heart, and may be reduced to one half the pressure before the irritation was applied. At the same time that the arterial pressure is diminished, the frequency of the heart's pulsations is reduced, *unless both pneumogastrics have previously been divided*, when, although the arterial pressure is reduced as before, the action of the heart is not disturbed. These experiments prove that the action of the depressor is entirely centripetal, that its inhibitory action upon the heart is reflex, through the nerve-centres, the trunk of the pneumogastric, and its remaining cardiac branches, while the reduction in the pressure of blood in the large arteries is independent of the centrifugal fibres of the vagus, and bears no relation to the reduction in the number of cardiac pulsations.

In determining the mechanism whereby the reduction in the arterial pressure is effected, Cym has displayed great ingenuity. Having, by a process of exclusion, eliminated all other possible agencies, he has clearly shown that this influence is exerted by reflex action, through the instrumentality of the splanchnic nerves, the most important vaso-motor nerves in the entire organism. "The irritation of the depressor nerve, after section of the splanchnic nerve," to use the language of Cym, "produced still a diminution in the blood-pressure, but the absolute value of this diminution is much less than it was during the irritation of the depressor nerve, before the section of the splanchnic."

The result of these experiments is to show that irritation of the depressor nerves exerts, through the splanchnic, an inhibitory or paralyzing influence upon the abdominal vaso-motor system; and thus, the resistance to the flow of blood being diminished in the immense vascular system of the abdominal organs, the pressure is correspondingly reduced in the arterial trunks.

(To be continued.)

Progress in Medicine.

REPORT ON PHYSIOLOGY.*

By H. P. Bowditch, M.D.

Animal Heat.

Rosenthal.—Zur Kenntniss der Wärmeregulirung bei den Warmblütigen Thieren. Erlangen. 1872.

Liebermeister.—Zur Lehre von der Wärmeregulirung. Virchow's Archiv, Bd. 52, p. 123.

Roehrig and Zuntz.—Zur Theorie der Wärmeregulation und der Balneotherapie. Pflüger's Archiv, iv. p. 57.

Paalzow.—Ueber den Einfluss der Hautreize auf den Stoffwechsel. Pflüger's Archiv, iv. 492.

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* Second semi-annual Report.

VIRCHOW.—Wirkung kalter Bäder und Wärmeregulirung. Virchow's Archiv, Bd. 52, p. 133.

SENATOR.—Untersuchungen über die Wärmebildung und den Stoffwechsel. Reichert und Du Bois Reymond's Archiv, 1872, p. 1.

WINTERNITZ.—Beiträge zur Lehre von der Wärmeregulirung. Virchow's Archiv, 1872, p. 181.

GARROD.—On the Relation of the Temperature of the Air to that of the Body. Journal of Anatomy and Physiology, vol. vi. p. 126.

HORVATH.—Zur Physiologie der thierischen Wärme. Centralblatt für die Med. Wiss., 1872, p. 706.

Zur Lehre vom Winterschafe, ditto. 1872, p. 865.

DRAPER, J. C.—On the Heat produced in the Body and the Effects of Exposure to Cold. American Journal of Science and Arts, December, 1872.

JUERGENSEN.—Die Körperwärme des gesunden Menschen. Leipzig. 1873.

We have, in the above-mentioned pamphlet of Prof. Rosenthal, an excellent *résumé* of the most important recent investigations in this department of physiology, and a clear statement of the present condition of our knowledge of the subject. This work is one of especial value to practising physicians, now that the thermometer has come to play such an important part in diagnosis and prognosis, for we find here a clear statement of the conditions under which alone accurate measurements of animal heat are possible. For a better comprehension of the problem, the author conceives the animal body as divided into three portions:—

I. A central portion, where the temperature is uniform, or nearly so, throughout.

II. An external layer, exposed to the cooling influences of the air.

III. An intermediate zone, where the temperature increases gradually from without inwards. The thickness of this zone differs in different parts of the body, being greatest in the most exposed portions.

To determine the real temperature of the animal body, the thermometer must be passed through the intermediate zone, and the measurements taken in the central portion. This is best accomplished in the rectum, and in order to be sure that the instrument lies in the central portion, it must be introduced slowly and the temperature read in different positions. As long as the mercury continues to rise in proportion to the depth to which the thermometer is introduced, it must be regarded as lying in the intermediate zone; but when a deeper introduction no longer has this effect, the reading of the thermometer may be considered as expressing the absolute temperature of the body. All the other parts of the body, which are used for thermometric purposes, viz., mouth, vagina, axilla, &c., lie in the intermediate zone, and give a temperature not only lower but more variable than that of the rectum. This is especially true of the axilla, whose temperature, being greatly dependent upon the vascularity of the skin, is sometimes found to rise under circumstances which cause that of the rectum to sink.

The constancy of the temperature of a warm-blooded animal is, of course, dependent upon an equilibrium being established between the production and the loss of heat in a given time. Any increase of the production or diminution of the loss of heat will therefore raise the temperature of the body, and, conversely, any diminution of production or increase of loss will lower it. The regulatory arrangements, by means of which the body is able to maintain the uniformity of its temperature in spite of variations of its surroundings, affect chiefly the loss of heat. Thus, exposure to cold causes contraction of the cutaneous bloodvessels, in consequence of which less warm blood is brought to the surface of the body, and therefore less opportunity offered for loss of heat by radiation. Exposure to heat has, of course, the opposite effect. The power of the body, however, to keep its temperature constant is confined within narrower limits than has been supposed. Rosenthal found, in his experiments on rabbits, that these animals could only preserve their normal temperature when the surrounding media had a temperature between 11° and 32° C. Man, who is able to adapt himself to a greater variety of climates than any animal, owes this power chiefly to his ability to effect voluntary changes in his food and clothing. Even in man, it has been found that a slight increase in the loss of heat, as by sudden removal of the clothes, is sufficient to cause a perceptible lowering of the temperature in the rectum.

There seems to be often a great want of promptness in the working of the regulatory arrangements, for Rosenthal found that, when a rabbit had been exposed for a certain length of time to air of 36° – 40° C., and then removed to air of ordinary temperature, the thermometer in the rectum indicated, for the next two or three days, a diminution of about 1° C. in the temperature of the body. When exposed to a sudden lowering of temperature in the surrounding media, we may "catch cold" in two different ways: firstly, heat enough may be abstracted from the warm surface of the body to cause a dangerous lowering of the temperature of the body; or, secondly (if the cutaneous bloodvessels contract to prevent this loss of heat), a sudden collateral hyperæmia may be produced. The prophylactic effect of cold baths seems to be due to their causing an increased "tonicity" of the cutaneous bloodvessels, so that they do not dilate so much under the influence of a high temperature of the surrounding media. Variations in the activity of the respiration and perspiration also influence the loss of heat from the body.

In addition to these means of regulating the *loss* of heat, are there any arrangements by which the *production* of heat can be varied in accordance with the needs of the body? In other words, does the production of heat in the body vary with the temperature to which the body is exposed?

This a question which, for more than ten years past, has been under discussion in Germany. The most conspicuous of the disputants, with their most recent writings, are given in the above list.

The affirmative side of the question is maintained by Liebermeister and by Roehrig and Zuntz. The facts upon which they rest their opinion are the following:—

I. A cold bath, or exposure of the skin to cold, often causes a temporary rise of temperature in the axilla or mouth. To this Senator and others object that measurements in the axilla do not give the true temperature of the body; that, under the same circumstances, the temperature in the *rectum* speedily falls from the beginning of the experiment; and that the temporary rise in the axilla is due to the constriction of the cutaneous vessels, in consequence of which the blood is not so much cooled in its passage through the limbs. The temperature rises, therefore, in the axilla in the same way as after the application of a tourniquet to the brachial artery.

II. The calorimetrical experiments of Liebermeister seemed to show that, by quietly lying in a bath of 20° – 30° C., not only the loss but also the production of heat is increased; so that in a bath of 20° – 23° C. from three to four times, and in a bath of 30° C. about twice as much heat is produced as by the same individual under ordinary circumstances.

The value of these experiments is disputed by Winternitz and Senator, who point out various defects in the methods adopted. Senator maintains that, in his own more carefully conducted calorimetrical experiments, no increased production of heat under the influence of cold could be detected.

III. Exposure to cold causes an increased absorption of oxygen and elimination of carbonic acid.

Senator admits the correctness of this observation, but concludes, from his own calorimetrical experiments, that heat production and excretion of carbonic acid do not always go hand in hand. He finds, for instance, during digestion, an increase both of carbonic acid excreted and of heat produced, but the production of heat is more increased than the elimination of carbonic acid. On the other hand, he finds that exposure to cold causes no increased production of heat, measured calorimetically, but a decided increase in the elimination of carbonic acid. Hence we must admit that there are processes going on in the body which produce heat, but do not set free carbonic acid; and, on the other hand, that the elimination of carbonic acid does not prove a contemporaneous production of heat.

Roehrig and Zuntz regard the production of heat in consequence of exposure to cold as a reflex phenomenon, dependent upon an irritation of the sensitive nerves of the skin, causing an increased metamorphosis of tissue. This same effect may be produced by irritating the cutaneous nerves in other ways, e. g. by salt water. In this way is explained the invigorating effect of sea-bathing.

(In this connection are to be noted Paalzow's experiments on rabbits, which show that a mustard poultice on the abdomen causes a decided increase in the absorption of oxygen and elimination of carbonic acid.)

Recognizing the important part played by the muscles in the production of heat, Roehrig and Zuntz regard the regulatory process as probably consisting in a weak reflex irritation of the motor nerves, which increases with the difference of temperature between the animal and its surroundings. Under ordinary circumstances, this irritation is not sufficient to cause a visible contraction of the muscles, but under the influence of severe cold we have the phenomenon of shivering, which, on this theory, is only an exaggeration of the normal regulatory process. If this view of the question be correct, we should expect that paralysis of the motor nerves by curare would not only lower the temperature of the body, but would also reduce the regulatory power to a minimum, and this is found to be really the case. On the whole, therefore, although an increased production of heat as the result of exposure to cold cannot be regarded as absolutely demonstrated, yet it must be admitted that there are many observations which point in this direction. Since we know, by the observations of Brondgeest, that muscular tonicity is a reflex phenomenon, it is reasonable to suppose that this tonicity will be increased by stimulation of the cutaneous nerves. This, of course, will cause an increase of the heat production which always accompanies muscular activity. On the other hand, as Rosenthal observes, the success of the cold-water treatment of fevers would hardly be explicable on the theory that an increased loss is necessarily accompanied by an increased production of heat.

The experiments of Horvath were made on marmots and hedgehogs, with a view of determining some of the characteristic phenomena of hibernation. The temperature in the rectum of a hibernating animal was found to sink as low as 2° C. On awakening from this condition, the temperature rose rapidly to 32° C.; but this rise was preceded (as far as can be judged from the meagre details of the experiments which are given) by an increased rapidity of the respiratory movements. Respiration experiments were made, both before and after waking, showing that the elimination of carbonic acid was four times, and that of water seven times, as great in the waking as in the sleeping condition. Experiments consisting in artificially cooling hibernating animals, showed that their hearts continued to beat and their muscles remained irritable at temperatures much below that at which these phenomena ceased in rabbits.

Draper's experiments had for their object, "to determine the quantity of heat passing off from the surface of the body, by finding how much it would elevate the temperature of a known mass of cool water during a given period of time." It was found that by lying quietly for one hour in a bath of 74° F., enough heat was lost from the body to raise the temperature of the water 2° F. and to lower that of the body, as measured in the mouth and armpit, 1° F. As the volume of water in the bath was seven and one-half cubic feet, and that of the body three cubic feet, it was concluded that enough heat is evolved from the body in one hour to warm the body itself 5° F. Dr. Draper further concludes that "the converse of this may also be considered as true, viz., that after death, the air being at 73° F., enough heat is lost in the course of an hour to cool the body five degrees, at least during the first hour." This, of course, could only be true if the production and loss of heat in the living body were the same as in the corpse, and the conducting power of air the same as that of water. From the figures in Dr. Draper's tables, it can be calculated that in a bath of 74° F. (23.3° C.) the body loses in one hour an amount of heat equal to 231 Calories, i. e. an amount capable of raising the temperature of 231 litres of water 1° C. This loss is not so great as has been observed by Liebermeister and others in baths of similar temperature, and the cause of the difference is perhaps to be found in the greater duration of Dr. Draper's experiments. Thermometers in the mouth and axilla indicated a steady fall of temperature during the bath and for a short time after leaving it. This was accompanied by a diminished rate of respiration and pulse. The continuance of the effect after leaving the bath is not explained by Dr. Draper, but it seems reasonable to suppose that the evaporation of the moisture adherent to the body on leaving the bath may have caused a further reduction of temperature. The fact that the air in the room had a temperature of 90° F. and contained only 53 per cent. of the amount of moisture necessary for its saturation, lends force to this suggestion. The diminished rate of the pulse seems to be due to a direct effect of a lowered temperature on the heart's action as demonstrated by Cyon.* The slow respiration may also be due to the same cause, but it is important to bear in mind that the rate of respiration has no direct connection with the activity of the interchange of gases in the lungs, and also that in counting one's own respiratory movements (as Dr. Draper himself observes), it is "very difficult to avoid influencing them in the act of counting." The most important result of Dr. Draper's experiments is that, when the experimenter in the bath executes continued muscular movements, the temperature of the water around him is not raised any higher than when he remains perfectly at rest. We must therefore conclude that the application of water of 75° F. to the surface of the body reduces to a minimum the function of the skin, considered as a regulator of animal heat, "and the whole duty of exhalation of vapor of water and consequent removal of heat is thrown upon the lungs; hence the increased respiratory actions, and hence also the special tendency of application of cold to the surface to produce inflammations of those organs by increasing the work they are obliged to perform."

Jürgensen publishes in pamphlet form observations previously communicated to the *Deutsches Archiv für klinische Medicin.* According to this observer, the temperature measured in the rectum of a person at rest has a normal daily variation of about 1° C., the highest temperature being in the afternoon, and the lowest between midnight and morning. The taking of food raises the temperature slightly, but not enough to interfere with the regular diurnal variation. The connection of sleep with changes of temperature is unfortunately not spoken of.

Temperature in Right and Left Ventricles.

Koerner.—Beiträge zur Temperatur topographie des Säugethierkörpers. Breslau, 1871.

Heidenhain.—Ueber den Temperaturunterschied des rechten und linken Ventrikels. Pflüger's Archiv, iv. 558.

Bernard.—La chaleur animale. Revue Scientifique, i., 133 et seq.

Stricker and Albert.—Untersuchungen über die Wärmeökonomie des Herzens und der Lungen. Stricker's Medizinische Jahrbücher, 1873, p. 30.

The observations of Bernard and Liebig were for a long time regarded as conclusive evidence that the blood in the left side of the heart is cooler than in the right side, and the conclusion seemed to be justified that the blood in circulating through the lungs is more cooled by coming in contact with the air and by the loss of watery vapor than it is heated by any chemical processes which may have their seat in the lungs. It would, therefore, be expected that the breathing of warm air saturated with moisture would cause a rise of temperature of the arterial blood. The experiments of Lombard,† however, seemed to show that this was not always the case, and further doubts were thrown upon the correctness of the above view by the observations of Jacobson and Bernhardt‡ who, in a series of experiments on rabbits with thermo-electric needles, found that, in the majority of cases, the blood of the left heart was warmer than that of the right.

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* Ueber den Einfluss der Temperaturänderungen auf Zahl, Dauer und Stärke der Herzschläge. Arbeiten a. d. Phys. Anstalt zu Leipzig, i. p. 77.

† Archives de Physiologie, 1868, p. 479.

‡ Centralblatt für die med. Wissenschaften, 1868, p. 643.

The question having been thus again opened, a large number of observations were made on dogs by Koerner and Heidenhain, partly with thermometers and partly with thermo-electric apparatus. They found that out of 94 observations only one showed an equality of temperature between the two sides of the heart, while in all the others the difference was in favor of the right side. The authors, however, propose an entirely new explanation of the cause of this difference. According to them thermometric measurements in the ventricles give not only the temperature of the blood contained in them but also that of the muscular walls, for these walls must necessarily at every systole be brought in contact with the bulb of the thermometer or the thermopile. Now the walls of the right ventricle are warmer than those of the left, because they lie in contact with the diaphragm which rests directly upon the warm organs of the abdominal cavity. The real reason then of the higher temperature in the right ventricle is that heat is conducted to its walls from the abdominal organs, while from the left ventricle heat is conducted away by the cooler lungs which surround it. This theory is supported by the observation that the difference of temperature between the two ventricles is increased by keeping the instruments pressed firmly against the muscular walls. Moreover filling the stomach with cold water or placing a bag filled with cold water under the diaphragm was found to diminish this difference, while the use of warm water in a similar way increased it. According to this theory, observations on the comparative temperature in the two ventricles have not the same physiological interest which has been heretofore attributed to them, since the difference of temperature depends chiefly on anatomical relations of organs which may vary in different animals.

Since the publication of Koerner's and Heidenhain's experiments, Bernard has given a course of lectures on animal heat, where he has mapped out very minutely the variations of temperature in the different parts of the animal body. He discusses the above theory and rejects it on the ground that the observations of Hering on a case of ectopia cordis have shown that even in this malformation the temperature of the right ventricle is higher than that of the left. Here, of course, the possibility of the communication of heat between the heart and the neighboring organs is excluded.

Stricker and Albert are also unwilling to accept Heidenhain's explanation, for they find that the difference in temperature between the right and left ventricles is unaffected by opening the abdomen and withdrawing the viscera from contact with the diaphragm. These observers give a very extended series of measurements in all parts of the heart and great vessels, from which they conclude that the muscular walls of the left ventricle are warmer than those of the right, but the blood of the right ventricle warmer than that of the left. This would of course indicate a cooling of the blood in the lungs.

Even if the views of Heidenhain and Koerner should not be fully sustained by subsequent experiments, there is without doubt sufficient truth in them to deprive the question of a great deal of the importance which it was formerly thought to possess.

(To be concluded.)

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, JULY 17, 1873.

THE SUPPRESSION OF QUACKERY.

OF the many difficult questions the solution of which rests with the medical profession, none is more urgent or more important than this. If the law forbade, as it should, under severe penalties, that any one should practise without the degree of a recognized college and the membership of the State Society, there would be nothing to desire; but as this is too much to hope for, for a long time at least, we must consider what is in our power. The *Canada Lancet* proposes to remedy the evil by instructing the people in medical matters, so that they may be able to recognize charlatanism. This plan agrees with the day's hobby of popular science, but we fear it would only increase the evil. The maxim that "a little learning is a dangerous thing," cannot be too often repeated. Every physician can testify that few patients are more troublesome than those who think they know something of medicine. The illustrations used by the *Lancet* in support of its theory do not strike us as happy. It says that "the large audiences which attended the lectures of Prof. Tyndall were pleased and delighted with his experiments and explanations on the subject of light." We have no doubt of it, but we do not believe that five per cent. of his hearers understood the subject, or could to-day give a rational account of his lectures. The second illustration is more unfortunate, as it speaks of the exhibition certain New York professors recently made of themselves in Steinway Hall as something creditable and instructive. The fact is, non-professional people are not able to judge of medical subjects, and it is not possible that they should become so. Nothing that is worth knowing can be mastered without severe study. Amateur medicine is on a level with political strategy, of which our late war afforded such frequent examples. Moreover, it must not be forgotten that the motto of the most pestilent class of quacks is "public instruction," and that it is under this disguise that books "for the young," "for the married," "for the unmarried," containing most pernicious stuff, are peddled through the country. In the same way, a tempting opportunity for attaining notoriety is offered to those who, if restricted to professional means, would see themselves condemned to obscurity. The struggles of the homœopaths to make capital out of the late trial is a case in point.

We think that the remedy is to be found in the direction opposite to that indicated by the *Lancet*. It consists in raising the standard of medical education, in making a degree something that one may be proud to have earned, in thus forcing the incompetent into the ranks of the irregulars, and in keeping the line between the latter and the profession sharply defined. Such a reform cannot be effected in a day, but it is sure to come if we do our duty. We must expect to be laughed at and sneered at, to be called bigots and fanatics; but in the end, merit will tell, and the dignity of the profession will be recognized. Many forms of error and delusion will fall of themselves, and public sentiment will permit the suppression, with the strong hand, of the viler and more dangerous forms of quackery.

EUROPEAN CHILD-LIFE IN INDIA.—At a recent meeting of the Medical Society of London *(British Medical Journal,* May 3d), Dr. Fayrer read a paper on this subject. He pointed out how rapidly the infant European population was increasing in India, and contrasted the mode of life in that country twenty-five years ago with what it is now. The queston had often been asked: "Can the Anglo-Saxon colonize India; i. e., can the race, unsupported and unrecruited from home, continue to reproduce itself and exist there? Could he, in short, do in India what he has done in America and Australia, people the country and displace or replace the autochthones and his older Aryan brethren who have become acclimatized during an occupation of many centuries?" Dr. Fayrer was of opinion that the data for forming a precise reply to this question did not exist, but his own firm conviction was that it could not be done; and he felt convinced that, had India been colonizable by the European, the position now held by them would be very different from what it is. The European who becomes an item in the fixed population, and who leads an ordinary temperate and correct life, had expectations of living perhaps little below those which he might have had in England. About 1815, an asylum was founded in Calcutta for children whose parents were European, and it is from the reports of this Society, numbering about 129 individuals, varying in age from one to eighteen years, that the following information is gathered. It was observed that the stimulating effects of an almost tropical climate asserted their influence; and, as a rule, the girl of sixteen or seventeen years was two or three years in advance of a girl of that age in a European climate. These children appear to have a great immunity from diseases peculiar to the country as well as from others of a severe kind; thus no cases of cholera, diphtheria, scarlatina, croup, pleurisy, pneumonia, ophthalmia, phthisis, dengue or malarious cachexia, have been known among them for many years. The death rate is about double that in England, as the following table will show:

	England.	India.	
Under 5 years	67.58	148.10	per 1000
From 5 to 10 years	8.80	17.73	"
From 10 to 15 years	4.98	11.51	"

The author concluded by saying that it was satisfactory to know that by care and proper training a European child may live, grow, and even thrive, on the plains of Bengal.—*British Medical Journal, May* 3, 1873.

Correspondence.

Messrs. Editors.—A writer in the last number of the *New York Medical Record* discourses somewhat diffusely but decidedly against the practice of supplying *Life Insurance* Companies with "*answers by the family physician*" so unscrupulously demanded by these companies. After saying:—"I have no hesitation in asserting that it is no part of his duty to furnish information to a life insurance company in respect to the health of individuals who may have placed themselves under his professional care. Not only is it no part of his duty as a medical man, but it is virtually a betrayal of the trust and confidence imposed in the unreserved relations between patient and physician"—he adds in closing:—

"It is remarkable that a common professional sentiment did not long ago protest against such an attempt to procure information, on the ground, already mentioned, of infraction of ethics, and disregard of individual obligation and propriety."

Now, Messrs. Editors, such a protest has been made time and again, with some effect undoubtedly, at least in this vicinity, but not with all that can be desired; for not unfrequently these "questions" are thrust upon practitioners in a manner to render consent or refusal very unpleasant. We therefore ask of you to reprint reasons for "declining to answer" which we prepared; and which were, with the hearty endorsement of the editors, published in this Journal a dozen years ago, as follows:—

The family physician, by answering such questions, virtually makes himself an agent of the Insurance Company, and if they are induced, by any inadvertence, error, or design of his, to assume an improper risk, however great may be the ultimate damage to the physician, the Company cannot escape thereby the payment of the amount insured. This is the legal aspect of the case. It is not altered by the applicant's wish to have the questions answered, since he only follows the directions of the Company.

As business men, money seekers merely, the Company ought not to expect that a physician, having no interest in their enterprise, will, for their exclusive benefit, voluntarily seek out and disclose to them, or put on record —the ultimate disposition of which he may know, and over which he can have no control—the constitutional weakness and physical defects of a patient and friend, in whom he may have great interest, and whose prospects he may not wish to disparage, much less to fatally injure. Yet the physician is, in fact, asked to do even thus much, to save a Corporation from the risk of a pecuniary loss.

For their own protection, the Company has, or should have, competent examining and consulting physicians, on whose investigations and judgment they should be willing to rely.

The relation between physician and patient is such, that a public parade of the former's knowledge and opinions, relative to the physical infirmities of the latter, may be accompanied, in almost every instance, with, to say the least, many serious objections. To medical men, these objections need be only alluded to. To such they are sufficiently obvious and obligatory. If they are not so to insurers, it may be from want of experience in that direction; but while they can obtain all needed information through their own examiners, without incurring these objections, they ought to be satisfied therewith.

In a word, Life Insurance Companies have *no right whatever* to make such demands of medical attendants, and it is quite time that the practice be discontinued.

We wish now to add to the reasons in the preceding extracts, that up to this time no good reason has been given why "the family physician" should answer such "questions" propounded by Insurance Companies. Certainly he should not do it for the sake of a fee,—there are some things which should be above, and unreachable by, price.

June, 1873. Iatros.

Medical Miscellany.

DR. HENRY TUCK has been elected one of the physicians to out-patients at the Massachusetts General Hospital.

WE are sorry to learn that Mr. Erichsen has been forced by illness to abandon work for some time to come.

IT is unkind of the *Chicago Medical Examiner* to accuse us of reporting incorrectly the proceedings of the American Medical Association, for we have not noticed them at all.

THE Trustees of Jefferson Medical College, unable to agree upon a successor to Prof. Pancoast, have adjourned the selection to October next.

CHOLERA of a virulent type has broken out in Cawnpore, and in Lucknow smallpox has made its appearance.

RIGID EXAMINATIONS.—Within the last ten months there have been four hundred and forty-three candidates for membership of the Royal College of Surgeons, England. Of this number, one hundred and four have been rejected.

Dr. COLTON thinks this the only dental, medical or surgical journal that does not acknowledge that Dr. Wells discovered anæsthesia. We naturally feel flattered, but fear that a large number of our contemporaries will not permit us to accept the compliment.

WRIGHT'S FORMULA FOR HEADACHE FOLLOWING ALCOHOLIC DEBAUCH.—Take of solution of acetate of ammonia, tincture of bitter orange peel, syrup of bitter orange peel, each 20 parts; water, 500 parts. To be given in repeated tablespoonful doses.—*Revue de Thérap. Med.-Chir.; Canada Medical Record.*

Re-printed for the use of prohibitionists.

HARVARD UNIVERSITY—CHANGES, &C.—Charles B. Porter, now demonstrator, to be assistant instructor in surgery; Clarence J. Blake, M.D., and J. Orne Green, M.D., lecturers on aural surgery; F. B. Greenough, M.D., and E. Wigglesworth, M.D., lecturers on syphilis; James R. Chadwick, M.D., lecturer on the diseases of women; Charles P. Putnam, M.D., lecturer on the diseases of children; James J. Putnam, M.D., lecturer on the application of electricity to nervous diseases.

RUPTURE OF THE BLADDER FROM INJURY; RECOVERY OF THE PATIENT.—Dr. J. Mengus *(Abeille Médicale)* records a case of this accident where the usually fatal result did not ensue.

At 9 o'clock in the morning, a young man, æt. 34, fell on the edge of a wine-press from a considerable height; he immediately felt an acute pain in the pelvic and right hypochondriac region, but was able to walk and get home to bed. He was seen two hours after the accident, and presented the following symptoms:—Pulse very slow and feeble; the right side of the belly swollen, tender, and dull on percussion; he had not passed urine since 4 o'clock in the morning, and could now pass only a few drops. A catheter was passed, which obtained but a few more drops, and a careful examination was made of the bladder, but no rent or opening could be ascertained. The bladder was then injected with warm water. The greater part, but not all, flowed back, tinged with blood. He was treated with opium, camphor, and quinine in pill frequently repeated. On the same day, in the evening, the pain increased; leeches were applied over the belly; he restrained himself from drinking as far as possible, and by the fourth week the symptoms had disappeared. He could retain and urinate as before.—*Dublin Medical Press and Circular.*

One profession (says *Punch*) is safe from the invasion of woman. She may enter the army, but it is impossible that she can man the navy.

The Overseers and Trustees of Bowdoin College have made the following elections for the Medical School of Maine. Dr. E. W. Jenks, Professor of Diseases of Women; Dr. Alfred Mitchell, Professor of Obstetrics and Diseases of Children; Dr. Robert Amory, Professor of Physiology; Dr. T. H. Gerrish, Professor of Materia Medica. The statement in some of the daily papers that Dr. Dwight was elected Professor of Anatomy is not strictly correct. He was *reëlected*, in order to correct certain clerical irregularities.

Uncivil Journals.—The *Western Lancet*, of San Francisco, shows its usual good taste in re-publishing our article (occupying twenty-one pages of that journal) on "Rhus Venenata and Rhus Toxicodendron," by Dr. James C. White, with the remark that it is "peculiarly interesting" to practitioners on that coast. No remark is made, however, as to the source from which the article was taken. The February number of "the largest medical monthly in America" contained over fifty-nine pages of material taken from the *New York Medical Journal*, without the slightest acknowledgment—one paper contributed by Dr. Sims constituting nearly half that issue.—*New York Medical Journal.*

NOTES AND QUERIES.

Why do not booksellers advertise their literary works more freely and frequently in medical journals? Are they not aware that, as a general rule, physicians are the great promoters of reading and study in the various circles of their clients, especially in country places? If they are unable to buy books themselves, they recommend, and cause to be bought, great numbers. *Here now is a suggestion*—what enterprising publisher will try it in this Journal?
Liber.

A good Word for our (Vermont) Homœopathists.—It is at least creditable to our homœopathists, in *Vermont*, that whilst those in Massachusetts have been absurdly fighting for affiliation with the State *Medical* Society, our own Hahnemannists are in entire accord with ourselves in our repugnance to *professional* association with each other.
Vermont, July 3d, 1873.
Galen.

Mortality in Massachusetts.—*Deaths in twelve Cities and Towns for the week ending July* 5, 1873.

Boston, 163—Charlestown, 11—Worcester, 15—Chelsea, 6—Cambridge, 15—Lawrence, 17—Springfield, 5—Newburyport, 3—Somerville, 9—Fall River, 16—Haverhill, 10—Holyoke, 12. Total, 282.

Prevalent Diseases.—Consumption, 44—cholera infantum, 41—pneumonia, 16—scarlet fever, 13.

Four deaths from smallpox occurred in Holyoke and two in Somerville. The deaths from scarlet fever were in Boston and Fall River.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, July 12th, 128. Males, 69; females, 59. Accident, 4—apoplexy, 1—asthma, 1—bronchitis, 2—inflammation of the brain, 4—congestion of the brain, 2—disease of the brain, 1—burned, 1—cancer, 2—cerebro-spinal meningitis, 3—cholera infantum, 23—consumption, 20—convulsions, 2—diarrhœa, 1—dropsy, 1—dropsy of the brain, 1—drowned, 1—diphtheria, 1—erysipelas, 2—scarlet fever, 10—typhoid fever, 3—bilous fever, 1—disease of the heart, 4—homicide, 1—intemperance, 1—jaundice, 1—disease of the kidneys, 5—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 3—malformation, 1—marasmus, 6—measles, 3—old age, 2—premature birth, 1—puerperal disease, 2—scrofula, 1—disease of the spine, 1—suicide, 2—ulcers, 1—unknown, 4.

Under 5 years of age, 61—between 5 and 20 years, 20—between 20 and 40 years, 21—between 40 and 60 years, 19—over 60 years, 7. Born in the United States, 98—Ireland, 21—other places, 9.

THE

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Original Communications.

OVARIAN TUMOR REMOVED BY ENUCLEATION.

By WALTER BURNHAM, M.D., Lowell, Mass.

CASE CXCIX.—*Ovariotomy.*—On the 17th of last month, I was called to visit Miss A. W., of Vermont, aged 22, who had been suffering from the inconvenience of an enlargement of the abdomen for about four years. She had menstruated regularly, and had but little pain and inconvenience, except from the size and pressure. She could exercise freely, but not rapidly; and chose to be upon her feet a considerable portion of the time, as the sagging of the tumor relieved the pressure upon the lungs and heart.

I arrived there, in company with Dr. Sherwood, of Fairfield, at about ten (10) o'clock, A.M., and made a hasty examination, and soon was satisfied that I had a unilocular cyst only to contend with, and, also, that there were not extensive adhesions; but as I could only move it to a limited extent, I also concluded that it had only a short pedicle. I advised Dr. Sherwood that we had better make preparations and operate the same day. He at once sent a messenger for some other medical assistants, who were prompt at the appointed time. The table was prepared in the usual manner, and a tub placed under the table to receive the contents of the tumor, and at 1.30, P.M., she was dressed for the occasion and placed herself upon the table without assistance. Chloroform was administered by her attending physician till she was in an anæsthetic state, when the napkin was changed for one moistened with ether, and immediately I was informed that she was ready for the operation. My first incision was made two inches below the umbilicus, and carried down over the linea alba about three inches to the peritoneum by a free cut; then I seized the peritoneum with the forceps, and carefully cut through it by a horizontal stroke of the scalpel, when I introduced a grooved director, and completed the incision through that membrane with a bistoury, as far as the angles of the incision through the skin. About two pints of serum flowed from this incision, which caused a little delay. I then introduced T. S. Wells's ovarian trochar into the cyst and drew off near fifty (50) pounds of clear, limpid serum, which passed into the tub under the table, through a three-fourths inch rubber tubing that was attached to the trochar. This done, I drew the sac through the incision upon the surface of the abdomen. I had previously informed Dr. Sherwood of my intention to enucleate the cyst in this case, and explained to him the process, that he might intelligently assist me if required.

I then made a small slit through the peritoneal coat near the pedicle, and with the handle of my scalpel separated the two coats from each other to a small extent, until I could grasp them in either hand, and at once completed the separation by pulling them apart, and thus removed the entire sac proper as belonging to the tumor; while that portion composed of peritoneum was laid back upon the abdomen, that I. might examine it, and wait a little for hæmorrhage to start, if at all. The effects of the atmosphere, though at a high temperature, soon contracted and corrugated the peritoneum to less than half its size, when I separated the cyst from it. On examination of the inner surface of the peritoneum, I found the vessels spread out upon it in a complete net-work, like that of an inflamed conjunctiva largely magnified; but there was no hæmorrhage, except one small artery where I divided the peritoneal coat; and here a small clot had formed, and I thought best to put on a ligature, as I did also on one upon the omentum, leaving the ends out at the lower angle of the incision, to keep it open for the discharge of any matter that might be deposited in the cavity.

After waiting more than an hour to allow the force of the heart to return, the sac was covered by a warm napkin before returning it into the abdomen. But finding no bleeding, I then placed it back into the cavity of the abdomen, and closed the wound by three sutures, one of which I passed through the edge of the peritoneum where I made the slit, to secure that point to the opening, in case any clot should form and require suppuration to remove it. Over this, adhesive straps and a compress of cotton, to fill the vacuum of the abdomen, were placed upon her, secured by a straight bandage.

I have made one hundred and ninety-nine (199) ovarian operations, and, so far as the removal of the tumor and completion of the operation was concerned, this was done sooner by six minutes than I have ever before performed it; and without any attempt at haste. But this method has the advantage also of not requiring any ligatures to bleeding vessels, or the pedicle, or any clamp even, for as there are no vessels cut there are none to bleed. But, as this was the first time I had made the operation in this manner, I thought it prudent to leave it so I could watch it myself for an hour.

I believe Dr. Miner, of Buffalo, N. Y., was the first to recommend this mode of treating the pedicle, and much credit is due to him for what seems to me a very great improvement over all others; both in convenience to the surgeon and in the safety of the patient.

After the delay in the dressings until the ether was fully exhausted, she was dressed for the bed and carefully laid into it, and the eighth of a grain of morphia given her. She soon after fell into a quiet sleep for an hour, and, waking, complained that she had had no dinner, and was hungry. Took a cup of gruel, which was repeated through the night as she demanded; took another eighth of a grain of morphia in six hours, and slept half the night.

18th, 6, A.M.—Had some headache; pulse had increased to 100; and, after inquiry, I found she had suffered for two hours with retention of urine. I drew off about a quart of water, which relieved her head, and the pulse returned to 80.

May 31, received a letter stating that she had been doing well all the time, had good appetite, &c. She is now nearly well, the sutures removed, the ligatures have both come away, and the wound all closed; but I do not think it best to allow her to go out too soon, or to move about the house much.

I shall be glad to see other surgeons adopting Dr. Miner's plan by enucleation, and let the profession know the results.

I consider this case as cured in two weeks, although it is prudent to require her to remain quiet for several weeks more. I have never closed the wound, or allowed it to close, until all the ligatures have come away; and I have many times seen a great advantage in having the ends to manipulate with where abscess has formed, and I have never yet seen any objection to their presence. Besides, I have several times known serious harm, and even fatal results, where other surgeons have cut the ligatures short and closed the abdomen over them. Abscesses have formed and opened in the perineum by the rectum, vagina, and at the point of incision. In all of my cases, I have had but one where abscess or suppuration has followed the operation with bad results. That one occurred twenty (20) days after, and rapidly terminated fatally, and it was not till after a *post-mortem* examination that an abscess was suspected, so rapid was the progress.

NOTES ON THE PNEUMOGASTRIC.

By J. F. Alleyne Adams, M.D., Pittsfield.

(Continued from page 61.)

Influence of the Pneumogastric upon the Lungs.—Recent experiments have made important additions to our knowledge of the nervous processes concerned in respiration. In the first place, Flint conclusively shows that the sense of want of air *(besoin de respirer)* is not communicated to the nerve centres by the pneumogastric; for respiration continues after section of those nerves. Further than this, Brown-Séquard maintains that the generally accepted view that the centre of respiration is located in the medulla oblongata, at the *nœud vital*, or vital point of Fleurens, is erroneous; for, although respiration is instantly arrested by section or a mere prick at this point, yet section of the medulla or the spinal cord below this point, and above the level of the respiratory nerves, does not, in young mammals and adult birds, immediately stop the rhythmical respiratory movements; and he has even found the contractions of the diaphragm to continue for a time, with great regularity, when its communication, not only with the medulla, but also with the spinal cord, has been cut away. From these observations, it is necessary to believe that the diaphragm is, to a certain extent, an independent organ, containing in itself, as does the heart, sympathetic nerve centres controlling its movements. But the vagus, although not indispensable to respiration, yet exerts upon it a powerful influence, whose nature will best be seen by noting the result of certain experiments.

If both pneumogastrics are divided in the neck, in dogs, the number of respiratory acts is at first increased; but, as soon as the animal becomes tranquil, the number is diminished, sometimes falling from sixteen or eighteen to four per minute. The inspirations are, at the same time, unusually profound, attended with excessive dilatation of the thorax. Death usually occurs in from two to five days, and, in most of the animals so dying, the lungs are found engorged with blood, so that they sink in water. This carnification is explained by Bernard as due to a rupture of the pulmonary capillaries, consequent upon a traumatic emphysema, resulting from the excessively deep and labored inspirations.

If galvanization be applied to the pneumogastric in the neck, the effect upon respiration varies, according as the excitation is feeble or energetic. A feeble current accelerates respiration, and renders it more vigorous, especially in inspiration, although, if the feeble current is applied very high up, near the origin of the nerve, respiration is arrested. If a powerful galvanic current is applied to the pneumogastric, in any part of the neck, respiration is arrested by a spasm of the diaphragm; but it speedily returns, even during the excitation. After the removal of the excitation, breathing is accelerated.

Galvanization of the superior laryngeal nerve, whether energetic or feeble, arrests respiration, by paralyzing the diaphragm. Galvanization of the recurrent laryngeal generally produces the same effect. Respiration is also sometimes arrested by the galvanic current applied to the pharynx or œsophagus.

Galvanization of the lungs produces persistent spasm of the diaphragm, and consequent arrest of breathing in inspiration.

From these experiments, it appears that the pneumogastrics exert a normal stimulant influence upon the function of respiration, and that, under certain circumstances, they may also exert an inhibitory power. The inhibitory effect is produced in one of two ways:—first, by a paralyzation of the inspiratory muscles, induced by irritation of the superior or inferior laryngeal, the pharyngeal or œsophageal branches; and, secondly, by a spasm of these muscles, from irritation of the trunk of the vagus, or its ramifications in the lungs.

The first of these modes of inhibition occurs normally in the act of deglutition. It is impossible to breathe, while swallowing; not only because the larynx is closed by the epiglottis, but also because there is a momentary reflex paralysis of the diaphragm, from irritation of the pharyngeal and superior laryngeal nerves.

In the operation of tracheotomy, a temporary stoppage of respiration not unfrequently occurs, from irritation of the inferior laryngeal nerve. The same effect has been observed by Brown-Séquard, on suddenly stopping the mouth of a tube introduced into the trachea of dogs or rabbits, all respiratory effort at once ceasing.

Arrest of respiration also takes place upon submersion. That this arrest is not dependent upon the spasmodic closure of the glottis, which also occurs, has been shown by Bean and Brown-Séquard, by submerging an animal in whose trachea a tube had been placed, whose free extremity communicated with the atmosphere. Even in this case, no effort was made to breathe, or if so, not till after some seconds. Bean asks if this arrest is due to the influence of *cold* upon the mouth and nostrils. Brown-Séquard answers the question by submerging an animal in *warm* water, in a similar manner, and finds respiration again suspended. He concludes that the irritation produced by the contact of either cold or warm water upon the mouth and nostrils, produces, by its *suddenness*, a reflex arrest of breathing. If the trunk or limbs are dipped in water, breathing is accelerated; but it is arrested by the sudden dashing of cold water upon any part of the body, an illustration of Bert's law that any gentle irritation of centripetal nerves increases the number of the respiratory movements, and any powerful excitation diminishes them.

The engorgement of the lungs following section of the pneumogastrics in the lower animals, is also seen in man, when, from any cause, that nerve is severed. A case occurred at the Boston City Hospital,* in 1865, of a woman, whose husband very skilfully divided with a knife the right pneumogastric, as well as the internal jugular vein and the neighboring muscles. She was attacked, on the tenth day, with congestion of the right lung, which passed off on the thirteenth.

Coughing is a reflex, spasmodic contraction of the expiratory muscles, produced by irritation of the inferior laryngeal or pulmonary branches of the pneumogastric. In asthma, there is, according to Salter, a spasmodic contraction of the bronchial tubes, caused by pneumogastric irritation. This irritation is generally reflex, from impressions upon the respiratory or gastric mucous membrane, or the skin; but may arise, as well, from cerebral disturbance. Neftel † has contributed some interesting observations upon the treatment of this most obstinate affection by galvanization of the pneumogastric. He uses the polar method, applying a current of gradually increasing intensity, all large fluctuations being carefully avoided, by means of the rheostat, and reports a marked degree of success, the paroxysm usually passing off, in from two to ten minutes. But he finds the relief afforded sometimes by the anelectrotonic, and at other times by the catelectrotonic condition of the vagus. Reasoning from the spasm-theory of asthma, it was to be expected that the former alone could give relief; but Neftel has found that in certain cases, the attack is arrested by the latter condition, after the former has failed. In explanation of this peculiarity, he suggests that the theory, held by Walshe and others, that asthma is due to a paralytic condition of the muscular coats of the bronchial tubes, may be true of some cases, while others are the result of spasm, the former class being relieved by catelectrotonus and the latter by anelectrotonus. The idea is certainly plausible, but, in the present inchoate condition of galvano-therapeutics, we must await further evidence before accepting it.

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* Boston City Hospital, Med. and Surg. Reports. 1870. Surgical Report, by Dr. D. W Cheever.

† W. B. Neftel. Galvano-Therapeutics. New York. 1871.

[To be concluded.]

Syphilitic Disease of the Placenta.—The *Med. Times and Gazette*, May 10, 1873, gives a summary of Dr. Ernest Fränkel's views on this subject. Dr. Fränkel's article contains the history of over twenty cases of syphilitic placenta. He summarizes his observations in the following conclusions:—1. The placenta may become affected by syphilis, and there are certain characteristic indications of this. 2. The syphilitic placenta occurs only in hereditary or congenital syphilis in the fœtus. 3. The seat of the disease varies according as the mother remains healthy, and the syphilitic virus is communicated directly from the father to the ovum by means of the semen; or according as the mother is diseased. In the former case the affected fœtal villi of the placenta degenerate through proliferation of cellular granulations, with consecutive obliteration and atrophy of the vessels, complicated frequently by marked proliferation and thickening of the epithelial covering of the villi. 4. In the latter case, when the mother is syphilitic, the three following conditions may occur:—*a*. The mother, through the act of impregnation, is simultaneously affected with syphilis with the fœtus; diffused syphilis of the placental villi may then develop itself, though primary infection of the maternal parts—endometritis placentaris—is not excluded. *b*. The mother becomes infected before, or shortly after, conception. The placenta may remain normal or become diseased under the form of endometritis placentaris gummosa, or, according to Virchow, in a more limited sense—endometritis decidualis. *c*. The mother becomes infected only during the latter months of pregnancy (seventh to tenth month). It then generally happens that, in case the father was healthy at the time of impregnation, the fœtus, as well as the placenta, is exempt from the above-described alterations. 5. The infection of the fœtus on passing through the maternal passages is rare, and not yet proved conclusively.

Reports of Medical Societies.

REPORT ON PHYSIOLOGY.

By H. P. Bowditch, M.D.

[Concluded from p. 67.]

Localization of Cerebral Functions.

Fritsch und Hitzig.—Ueber die electrische Erregbarkeit des Grosshirns. Archiv für Anatomie, Physiologie und wissenschaftliche Medicin, 1870, p. 300.

Hitzig.—Ueber die beim Galvanisiren des Kopfes entstehenden Störungen der Muskelinnervation. Archiv für Anat., Physiol. und wissenschaftliche Medicin, 1871, p. 716.

Weitere Untersuchungen zur Physiologie des Gehirns. Do., 1871, p. 771.

Beaunis.—Note sur l'application des injections interstitielles à l'étude des fonctions des centres nerveux. Gazette Médicale de Paris, 1873, Nos. 30–31.

Nothnagel.—Interstitielle Injectionen in die Hirnsubstanz. Centralblatt für die med. Wissenschaften, 1872, p. 705.

Experimentelle Untersuchungen über die Functionen des Gehirns. Virchow's Archiv, 1873, p. 184.

Ferrier.—Experimental Researches in Cerebral Physiology and Pathology. British Medical Journal, April 26th, 1872.

J. Hughlings Jackson.—On the Anatomical and Physiological Localization of Movements in the Brain. Lancet, 1873, p. 84.

On the Anatomical Investigation of Epilepsy and Epileptiform Convulsions. British Medical Journal, May 10th, 1873.

Meynert.—Article on Brain of Mammals in Stricker's Handbook, and Résumé by Dr. J. J. Putnam. Archives of Scientific and Practical Medicine, i. p. 172.

Brown-Sequard.—On the Mechanism of production of Symptoms of Diseases of the Brain. Archives of Scientific and Practical Medicine, i. p. 117.

On the Sudden or Rapid Arrest of many Normal or Morbid Phenomena. Do., i. p. 87.

The phenomena of aphasia were at one time regarded by most physiologists as affording satisfactory evidence that at least *one* mental faculty has its seat in a definite, circumscribed portion of the brain. The accumulation, however, of recorded cases in which the disease has been observed without the lesion, and of those in which the lesion has been found without the disease (among which may be mentioned the celebrated "crow-bar case"), has gradually led to the abandonment of this view, as being, at best, only a partial expression of the truth.

The experiments of Fritsch and Hitzig have opened a new field of physiological investigation, and seem to furnish the best evidence we have of a localization of functions in the cerebral substance. These observers removed the upper portion of the skull of dogs, with the exception of a narrow strip of bone over the longitudinal sinus, and irritated the exposed surface of the brain with weak constant and induced currents. When the electrodes were placed upon the anterior portion of the cerebral lobes, muscular movements of various sorts were produced, which was not the case when the posterior portion was irritated. This is of interest, since, according to Meynert's anatomical investigations, the motor nerves are in communication with the anterior and parietal, and the sensitive nerves with the posterior and temporal portions of the brain. Fritsch and Hitzig further discovered that, by irritating certain definite portions of the convolutions, particular groups of muscles on the opposite side of the body could be brought into activity. In this way, "centres" were demonstrated for the muscles of the neck, for the extensors and adductors of the forearm, for the flexors and rotators of the arm, for the muscles of the foot and for the facial muscles. To control these results, the experiment was tried of boring through the skull of dogs at a point, determined by previous experiments to be the centre of movement of the right foreleg, and removing a small portion of the gray substance. Dogs thus operated upon were found to have only an imperfect control over the movements of the limb in question.

In this connection is to be noted a case of depressed fracture of the temporal bone, reported by Wernher, in *Virchow's Archiv* for 1872. Convulsion and paralysis occurred in those muscles whose "centres" were involved in the injury.

The observations of Fritsch and Hitzig have been confirmed and extended by Ferrier, who has, however, as yet published his results only in the form of a brief "preliminary notice." The following are some of the most important of his conclusions :—

I. Those groups of muscles which may be regarded as most voluntary, i. e., those which are in frequent and varied action, have particularly well-marked centres in the cerebral hemispheres. Thus, the centres for the muscles of the tail in the dog, for those of the paw in the cat and for those of the lips and mouth in the rabbit, were found to be very strongly pronounced.

II. The action of the hemispheres on the muscles is generally crossed, "but certain movements of the mouth, tongue and neck are bilaterally coördinated from each cerebral hemisphere."

III. The cerebellum contains centres of coördination for the muscles of the eye, injury to which causes loss of equilibrium.

This last conclusion seems also to be justified by the observations of Hitzig on the effects of a galvanic current directed through this portion of the encephalon. If a constant current is directed from one mastoid fossa to the other, dizziness is produced, accompanied by apparent movements of external objects from the side of the anode to that of the kathode. These are due to real unconscious movements of eyes in the opposite direction. If the eyes are closed, the body seems to be falling to the side of the kathode, and an effort is made to recover the equilibrium, which results in a fall to the opposite side. The rolling movements of animals after injury to the cerebellum are explained by Hitzig on the supposition that the animal so affected has continually the impression that it is falling to the injured side, and consequently makes violent efforts which carry it constantly in the opposite direction.*

To avoid the general disturbance resulting from the removal of a portion of a nervous centre, Beaunis and Nothnagel attempted to destroy the functional activity of definite portions of the brain by the injection of various fluids. Nothnagel injected a concentrated solution of chromic acid through a fine subcutaneous syringe. The effect is to color green and to harden the cerebral tissue with which the acid comes in contact. Around this portion a very circumscribed inflammation is produced, and its functions may be considered as annihilated. Rabbits were found to survive this operation only from one to three weeks. It can scarcely be regarded, therefore, as simply annihilating the function of the part affected. The results of Nothnagel's experiments confirm, in general, those of Fritsch and Hitzig. The former observer, however, distinguishes the motor centre of the limbs from the centre of muscular sense. Both lie close together in the anterior portion of the opposite cerebral lobe, the former a little farther forward than the latter. The great advantage of Nothnagel's method is that it enables him to operate upon the deeper portions of the brain without destroying the more superficial parts.

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* See, also, Report on Electro-Therapeutics, this JOURNAL, Oct. 31st, 1872.

Lesions of the brain are termed, by Hughlings Jackson, "destroying" or "discharging," according as they annihilate or stimulate the functional activity of the parts where they occur, the former causing paralysis and the latter convulsions, when occurring in parts of the brain connected with the muscular system. The study of destroying lesions of the corpora striata has shown that the paralysis thereby produced on the opposite side of the body attacks first the more voluntary and afterwards the more automatic muscles. The same order is observed in the case of destroying lesions which affect only mental phenomena, the brain, in undergoing slow deterioration, becoming more automatic and less voluntary in its actions. Something of the same sort seems to take place in the temporary mental paralysis produced by alcohol, thus affording a physiological explanation of the saying, "*in vino veritas.*"

"Discharging" lesions also show the same peculiarity in regard to the order of the muscles affected, convulsions beginning most frequently with the hand, less frequently with the face, and still less frequently with the foot.

Hughlings Jackson refers to Ferrier's experiments as artificially produced discharging lesions, and regards the study of discharging lesions, natural and artificial, as the only method by which the localization of functions in the cerebral lobes can be determined; for though a destroying lesion may annihilate the functional activity of a certain portion of the brain, it is quite possible that its functions may be discharged by some other portion, and thus no effect of the injury be apparent. On the other hand, a discharging lesion, by bringing a certain portion of the brain into activity, must always produce some definite effect. The recognition of this power of vicarious activity in the different parts of the central nervous system will doubtless explain many apparent contradictions between pathological observations and physiological experiments; for it is quite conceivable that experimental destruction of a certain part of a nervous centre may cause serious functional disturbance, while pathological degeneration of the same part, occurring slowly and allowing time for other portions to assume the functions of the part affected, may produce no such result.

In the recently published views of Brown-Séquard on nervous physiology, the so-called "inhibitory" processes play a much more important part than has been heretofore assigned to them, twenty different kinds of inhibitory phenomena being enumerated, of which the arrest of the heart by the galvanization of the vagus nerve is the best understood. Both the production and the cure of a great variety of mental disturbances are due, according to this author, to inhibitory influences proceeding from one portion of the central nervous system to another. While admitting "that a considerable alteration of the whole extent of the cortical parts of the brain will affect the mental faculties in a direct way, i. e., as taught by the old theories," Brown-Séquard concludes, "from the study of every symptom of brain disease, that all parts of the brain resemble the peripheric parts of the nervous system, in being able, under irritation, to act on any of its other parts, modifying their activity, so as to destroy, or diminish, or to increase and to morbidly alter it." In other words, an injury to any one portion of the brain may produce not only the *direct* effects of a destroying or discharging lesion of the part affected, but also an *indirect* effect upon *any other* portion of the brain; and this indirect effect may be either to increase, to diminish, or to morbidly alter the functions of the part thus affected. With such unlimited possibilities in the way of effects, cerebral lesions may well be regarded as defying diagnosis.

TROPHIC NERVES.

JOSEPH.—Ueber den Einfluss der Nerven auf Ernährung und Neubildung. Archiv für Anat., Physiol. und wissenschaftliché Medicin, 1872, p. 206.

POWER.—The Influence of the Nerves on Nutrition. Practitioner, March, 1873.

CHARCOT.—Leçons sur les Maladies du Système Nerveux. Paris. 1872.

VULPIAN.—Recherches relatives à l'influence des lésions traumatiques des nerfs sur les propriétés physiologiques et la structure des muscles. Archives de Physiologie, 1872, p. 245.

HAYEM.—Note sur deux cas de lésions cutanées consécutives à des sections de nerfs. Archives de Physiologie, 1873, p. 212.

RANVIER.—De la dégénérescence des nerfs après leur section. Comptes Rendus, Dec. 30, 1872.

The question whether the nerves exercise any *direct* influence upon the nutrition of the tissues to which they are distributed is one of great practical importance; for, as Dr. Anstie well observes, "the hope of discovering scientific and intelligible rules for guidance in the employment of many important remedies, and especially *electricity*, depends largely upon our coming to a decision on this matter." Notwithstanding the great number of experiments and observations that have been made with a view of throwing light on this question, there is still a great difference of opinion amongst writers on the subject. Joseph concludes, as the result of his experiments on frogs, that in these animals the nerves exercise absolutely no direct influence on the nutrition of the tissues. Section of the nerves of a limb produces no disturbance of nutrition, excepting the slow atrophy resulting from functional inactivity, and irritation of the nerves is likewise without effect. Wounds heal as perfectly and as rapidly whether the nerves supplying the parts are divided, irritated or left intact.

Power also denies the existence of trophic nerves, and refers the nutritive disturbances which are known to frequently follow nerve lesions in man and the higher animals either to irritation or to paralysis of the vaso-motor nerves, or to a loss of functional activity of the part. He cites various instances of tissues, both normal and pathological, which are destitute of nerves, and where, nevertheless, nutrition takes place; but this, of course, is no proof that nerves may not influence the nutrition of the tissues in which they are present, any more than the absence of bloodvessels in the cornea is a proof that the circulation of the blood plays no part in the processes of nutrition.

Charcot, who discusses the whole question most thoroughly and systematically, rejects the theory that paralysis of the vaso-motor nerves alone can cause trophic disturbances, for section of these nerves in animals is not followed by any such results if care is taken to exclude all other possible causes of trouble, though the hyperæmia thus produced creates, without doubt, a certain predisposition to inflammations. Moreover, the lesions of the skin, muscles, joints, &c., which occur in man, as the result of injuries to nerves, are not accompanied, as a rule, by signs of vaso-motor paralysis or irritation.

"Nothing is better established in pathology," says Charcot, "than the existence of these trophic disturbances as the result of lesions of the nervous centres or the nerves. And yet the most advanced physiology teaches that, normally, the nutrition of the different parts of the body does not depend essentially upon an influence of the nervous system." To explain this apparent contradiction, Charcot accepts the proposition first announced by Brown-Séquard, that *section* of a nerve causes, in the tissues supplied by it, only those slow changes which are due to a functional inactivity of the part, while *irritation* of a nerve may produce, with considerable rapidity, a variety of lesions which have generally more or less of an inflammatory character. On this principle are to be explained the results of incomplete section, contusion, &c., of nerves, these injuries causing irritation of the nerve in consequence of the inflammation which they produce. This is quite in accordance with the views of Weir Mitchell, derived from the observation of gun-shot wounds of nerves.

On the other hand, the observations of Vulpian on the influence of nerve-lesions on the muscles which they supply, lead him to the conclusion that, as far as the effect on muscular contractility is concerned, there is little difference between a section, an excision, a contusion, a ligature and a cauterization of the nerve. In this connection is also to be noticed a case, reported by Hayem, of section of the median nerve by a splinter of glass, resulting in loss of motion and sensation in the thumb, index and middle finger, followed, after six weeks, by a pustular eruption and ulceration of the ends of the fingers. As there was never any great pain, it seems unlikely that an inflammation of the nerve at the level of the wound could have been the cause of the morbid phenomena.

Whatever may be the result of section of a nerve on the nutrition of the parts to which it is distributed, there is no doubt that the peripheric portion of the divided nerve undergoes changes, usually described as degenerative, in consequence of which it loses its irritability. That these changes involve the destruction of the axis-cylinder is now generally admitted, but the way in which this result is brought about is still under discussion. Ranvier has recently investigated the subject in the light thrown upon the question by his observations on the structure of the normal nerve fibre.* He finds that, immediately after the section of the nerve, the nuclei of the peripheric portion enlarge and proliferate, and the protoplasm around them increases in amount in such a way as to press upon the medullary substance and axis-cylinder and, finally, to destroy their continuity. This happens about the third or fourth day after the section, which is about the time at which divided nerves are found to have lost their irritability. Ranvier considers that an influence proceeds from the nervous centres which regulates or controls the nutrition of the nerves and of the tissues to which they are distributed. Section of the nerve is therefore followed by an uncontrolled and irregular growth (often leading to destruction) of the parts thus deprived of nervous influences.

It will thus be seen that the question is far from being settled. It would at first sight seem improbable that section and irritation of a nerve should both produce the same effect upon the tissues to which the nerve is distributed; but it must be borne in mind that it is probably impossible to produce experimentally a simple withdrawal of the tissues from the influence of the nerves, for a section of a nerve, however carefully accomplished, is liable to produce a certain amount of irritation both at the time of section and in the course of healing. The observations of Ranvier, showing a similarity in the processes which take place in the peripheric end of a divided nerve and in tissues whose nerves are irritated, may be regarded as indicating that the so-called degenerative changes in divided nerves are really due to irritation at the point of section. Moreover, the fact that divided nerves, after undergoing so-called degeneration, are regenerated without reunion of the divided portions, seems to show that the changes in the peripheric portion cannot be due to a mere absence of an influence proceeding from the nervous centres. If this view be correct, there is only a difference in degree between the effects of section, and those of irritation, of a nerve; and while we cannot admit the existence of special nerve fibres charged with conveying trophic influences to the tissues, we must yet acknowledge that, in certain morbid states of the nerves and nervous centres, an influence is transmitted to the tissues in consequence of which disturbances of nutrition occur.

PROPYLAMINE.—This drug is contained in the flowers of *Cratægus oxycantha*, in the fruits of *Sorbus ancuparia*, in the *Chenopodium vulgare*, and in the ergot of rye, &c.; but it exists in greatest abundance in herring brine, where it is combined with an acid from which it may be separated by distillation with potassa. It is a colorless, transparent liquid, with a strong ammoniacal odor, soluble in water, and presenting even in weak solutions a strong alkaline reaction. It combines with acids to form crystallizable salts, and, like ammonia, produces dense fumes when brought into contact with the vapor of hydrochloric acid. It was discovered in 1850 by Wertheim. It is highly recommended as a remedy for acute rheumatism, the dose being one or two minims three or four times a day.

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* This JOURNAL, Sept. 12th, 1872.

Bibliographical Notices.

Civil Malpractice. A Report presented to the Military Tract Medical Society at its Fifteenth Semi-annual Meeting, January 14, 1873. By M. A. McClelland, M.D. Chicago: W. B. Keen, Cooke and Co. 1873.

Dr. McClelland, appointed on the Committee on Surgery, selected Civil Malpractice as the subject of his report. He begins by adverting to the almost total want of instruction on medical jurisprudence in our medical schools. He divides malpractice into two kinds: civil malpractice, in which patients bring suits for damages; and criminal malpractice, in which the people, or State, is made the plaintiff. Malpractice is "want of skill, and negligence." From the rulings and decisions of the courts, Dr. McClelland endeavors to determine "what the law requires of us as surgeons," and "what is considered skill and care by our leading authorities in medicine. The law on responsibility of surgeons is well laid down in Hilliard's Law of Torts"; this is transcribed in full and is very sound. The phrase "ordinary skill" is ingeniously defined, and many authorities are quoted. Adjudicated cases are narrated, and fill forty pages with interesting, instructive and important information. At the close of the most excellent and painstaking article on various adjudicated cases, an article showing an enormous amount of research and patience, and citations of hundreds of authorities, occurs this remarkable sentence:—"The union of 'shyster' and 'quack' is frequently met with in suits for malpractice, as many of the above cases show." What is meant by a union of "shyster" and "quack" is to us unknown. Perhaps the slang expression "shyster" (whatever it may mean) is good usage in Chicago.

Dr. McClelland goes on to discuss the matter of skill and negligence very ably. First he considers the duty of the surgeon in diagnosis. In doing this he gives us excellent rules from various authorities, and illustrates the difficulties by cases in point. Next, as to treatment and the management of accidents during treatment, Dr. McClelland quotes largely from Ashurst and also from Prof. Hamilton. "In respect to amputations, there is much error prevalent. The people suppose that whoever has performed an amputation of this character must necessarily be an eminent surgeon." The decision as to the necessity for the operation requires the highest degree of surgical skill and judgment, and Gross's and Hamilton's opinions on this question are given as authorities.

"What conclusions," he asks, "may be deduced from these judicial and medical views of 'skill' and 'negligence?'" Dr. McClelland's conclusions are the following:—"Although no surgeon, however eminent, is exempt from the danger of suits from ungrateful patients, the law is for the surgeon's protection as well as for the patient's. . . . . . We need nothing more to make our protection perfect than the enactment of some statute, like that proposed for New York, which will oblige the plaintiff to secure us against all loss in case he does not maintain his suit. We should also be permitted to have one expert on the jury, and, too, there should be some way in which the professional standing of the prosecuting witness could be investigated, to the end that such nonsense as that given in the case of Haire *v.* Reese, wherein the plaintiff's witness gave it as his opinion 'that the head of the femur might be "*crepitated*" by absorption,' may not continue to go to juries as sound medical evidence. Under no circumstances should we compromise such suits. We owe it to ourselves, we owe it to our profession, we owe it to the public whom we serve, to let the matter be tried by the strict letter of the law, and thus vindicate the honor of our profession."

On the whole, Dr. McClelland has given us a very valuable little work, on an extremely interesting subject; the adjudicated cases are well detailed and of great value. It is to be hoped that the subject will be elaborated still farther.

The Mission for Animals. Secretary's Report. Boston. 1873. Pp. 15.

The Mission for Animals is not to be confounded with the State Society for the Prevention of Cruelty. Its field of labor extends throughout the country. In the first circular it is stated that "The Mission for Animals is based chiefly upon the following reasons and considerations:—that the public health, economy and morals are, to a great extent, injuriously affected by our present modes of treating 'live stock' destined for food, clothing and other uses." The condition of wild animals is also considered. The number of buffaloes slaughtered yearly is immense. It is estimated that in 1872 about 275,000 were killed in Kansas alone, and that a twenty-fourth of these, or about 11,458, were slaughtered in "sport and wantonness."

Although we are not disposed to look very severely on a visitor to the West who would like the excitement of a buffalo hunt, we agree that such wholesale butchery should not be permitted. The moose will shortly be extinct in New England, and it is sad to think that the buffalo is likely to follow. We see, in this report, that the North Pacific whaling fleet kill walrus to such an extent that the inhabitants of Alaska are in great danger of being left without food. This strikes us as a case of cruelty to man, yet Congress took no action on a petition concerning it. The report gives some very painful accounts of the treatment of domestic animals, particularly on the road to the slaughter-house.

"An ambulance, or, quite as properly, a dead cart, usually follows a drove of hogs or sheep, and when one falls down it is picked up and tumbled in; and sometimes they are piled atop of each other until the cart is full. And if those first put in are not already dead, they are soon crushed into that painless state by those lying on them. This can be verified almost anywhere along the road from Brighton to Peabody. These animals are turned into *mutton*. Last January, I saw a large drove of hogs wallowing through the snow, up Friendship St., in Providence, followed by a large sled half filled with those which had fallen down, unable to go. The sled was at least a dozen feet long, and the hogs were piled several tiers deep at the forward part, so as to make it convenient to stack them in behind, as fast as they should give out. The blood was dripping from the sides and tail of this sled. These animals were so overheated with their struggles to get through the snow, that, notwithstanding the intense cold, the street was filled with a cloud of steam from their bodies. These creatures—*those that ride* and those that walk—are converted into *pork, in all its varieties.*"

We hope that at our new abattoir such meat will not be received.

We like the way in which the report is written; it is plain and honest, and not, except in one instance, "gushing." Nor do the grievances complained of appear to be sentimental or trivial. Many similar societies have lost much prestige by making themselves ridiculous; nothing can be worse policy, for while there is so much severe suffering in the world it is wrong and silly to seek for petty and unnecessary grievances.

The Mission has our best wishes.

BOOKS AND PAMPHLETS RECEIVED.

On the Treatment of Diseases of the Skin, with an Analysis of eleven thousand Consecutive Cases. By Dr. McCall Anderson. Philadelphia: Henry C. Lea. 1873. Pp. 84. (For sale by A. Williams & Co.)

Chemistry; General, Medical and Pharmaceutical, including the Chemistry of the U. S. Pharmacopœia, &c. By John Attfield, Ph.D., F.C.S. Fifth Edition. Philadelphia: Henry C. Lea. 1873. Pp. 606. (For sale by A. Williams & Co.)

An Introduction to the Study of Clinical Medicine, being a Guide to the Investigation of Diseases. For the Use of Students. By Octavius Sturges, M.D. Cantab. Philadelphia: Henry C. Lea. 1873. Pp. 127.

A Guide to Urinary Analysis. For the Use of Physicians and Students. By Henry G. Piffard, A.M., M.D. New York: William Wood & Co. 1873. Pp. 83.

Contributions to Practical Surgery. By George Norris, M.D., late Surgeon to the Pennsylvania Hospital, &c. Philadelphia: Lindsay & Blakiston. 1873. Pp. 318. (From James Campbell, Boston.)

Dictionary of Pharmaceutical Science. By H. V. Sweringen. Philadelphia: Lindsay & Blakiston. 1873. Pp. 576. (From James Campbell.)

Progressive Myopia and its Operative Cure. By Richard H. Derby, M.D. 1873. Pp. 18. (Re-printed from the New York Medical Journal.)

Fracture of the Elbow-joint. An Essay to which was awarded the Second Prize of the Boylston Medical Society for 1873. By Walter Ela. Cambridge: Welch, Bigelow & Co., University Press. 1873. Pp. 57.

Ergot in the Treatment of Nervous Diseases. By Daniel H. Kitchen, M.D. 1873. Pp. 16. (Re-printed from the American Journal of Insanity.)

An Examination of Prof. Reese's Review of the Trial of Mrs. Wharton for the Murder of General Ketchum. By Philip C. Williams, M.D. 1872. Pp. 31. (Re-printed from the Medical and Surgical Reporter.)

A Reply to Dr. H. C. Wood's Review of the Medical Testimony in the Trial of Mrs. E. G. Wharton for the alleged attempt to poison Mr. Van Ness. By Philip C. Williams, M.D. 1873. Pp. 31. (From the Richmond and Louisville Medical Journal.)

The Mission for Animals. Secretary's Report. 1873. Pp. 15.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, JULY 24, 1873.

A TRIUMPH OF MORALITY.

IT is with a feeling of unmitigated triumph that we make the announcement which will be seen lower down. Delighted with the reform itself, we are proud that it should have been due to the efforts of a Medical Society, proud that our city government should set so admirable an example, and proud that it should be the privilege of the JOURNAL to be the first to make it public.

It will be remembered that the destructive fire of May 30th swept away one of the disgraces of the city, namely "*Dr. Jourdain's Gallery of Anatomy.*" This exhibition was a type of its class; it was a collection of anatomical models and dissections, with representations of skin and venereal diseases, most improper for public exhibition, and calculated to excite the morbid curiosity of the young together with its peculiar forms of hypochondria. Vile pamphlets were on hand to induce those having or fearing disease to consult the proprietor. The harm which this single establishment must have done cannot be calculated. Directly after the fire, a sensational notice appeared in the papers to the effect that orders for new specimens had been sent by telegraph to some of the capitals of Europe, and that the place would re-open (if we remember right) on the fourth of July. This happily did not occur, and another advertisement, which still appears daily, was substituted, stating that the new museum would re-open (*sic*) shortly, and giving the address of the "Doctor's" office.

The following communication, which we are fully at liberty to publish, from the Secretary of the *Boston Society for Medical Observation*, shows that this nuisance is happily at an end.

"At a meeting of the Boston Society for Medical Observation, held in the hall of the Massachusetts Medical Society, June 16th, the following resolution was unanimously adopted:—

"*Resolved,* The Boston Society for Medical Observation respectfully petitions his Honor, the Mayor, and the City Government of Boston, in the cause of morality and public decency, not again to license such an exhibition as the "Gallery of Anatomy," so called, destroyed in the recent fire, and if any such license now exists, that it be annulled.

"It was also voted that a Committee of four be appointed to confer with the authorities at the City Hall in case they should desire any evidence as to the indecent and immoral character of the exhibition in question. The Chairman of the meeting appointed as the Committee, Drs. B. Joy Jeffries, Henry I. Bowditch, Edward Wigglesworth and William L. Richardson.

"A few days after the meeting, the Secretary of the Society called upon Mayor Pierce and presented a copy of the resolution. Mr. Pierce stated that the action of the Society met with his most cordial approval, and promised to bring the subject at once before the Committee on Licenses, of which Alderman Sayward was Chairman. The Secretary subsequently saw Mr. Sayward, who also expressed himself in perfect accord with the wishes of the medical profession as shown by this action of the Medical Observation Society.

"A few days ago the following letter was received from his Honor, the Mayor, written after consultation with Mr. Sayward and giving the latter's decision on the matter, as Chairman of the Committee on Licenses.

"EXECUTIVE DEPARTMENT,
CITY HALL, BOSTON, July 8, 1873.

"*Dear Sir:*—I have the honor to acknowledge the receipt of your communication forwarding the copy of a resolve of the Boston Society for Medical Observation, relative to licensing the Gallery of Anatomy, so called, in this city, destroyed by fire, May 30, 1873.

"I can say in this regard that the proprietor of the Gallery of Anatomy has not as yet applied for a new license for his exhibition, and that such an application will be met by a refusal whenever it is made. Mr. G. E. Lothrop, recently applied for a license for a similar exhibition in Court Street, and was refused by the Board of Aldermen.

"Thanking you for bringing the matter to our attention,

"I am with respect, your obedient servant,

HENRY L. PIERCE,
Mayor.

To W. L. RICHARDSON, M.D.,
Sec'y Boston Soc. for Med. Observation."

The importance of this decision is very great, and we think will have a most excellent effect not only for a long time to come in this city, but also throughout the country. Let the physicians in other cities imitate the action of the Society for Medical Observation, and even if they do not meet with such cordial support from the authorities, they at least will feel that they are in no way privy to the nuisance by the implied consent of silence. We should be doing less than justice to the sound will and right feeling of the Board of Aldermen, did we fail to call special attention to the fact set forth in the Mayor's letter, that it refused of its own accord an application for a license for a similar exhibition. It is good to see the government take so effective a step in the interests of public morality, and it gives us much needed encouragement to continue our efforts for the suppression of quackery.

THE first annual report of the City Board of Health was submitted to the Board of Aldermen at its meeting of last week. The record of its first six months' work is a gratifying one. The brilliant results accomplished by them in their active suppression of the smallpox epidemic are accurately and clearly brought out by the figures which accompany the report. The story is already an old one to the public, but, viewed in the light of a scientific fact, will long be remembered and quoted by professional men. We hope the suggestion, that a permanent smallpox hospital should be erected in some suitable part of the city, will meet with the attention which it deserves, and that the city government will not allow its judgment in this matter to be warped by the timid and the ignorant. Our experience of last winter must show, even to the latter, the absurdity of fears of any real danger from such a neighbor. The work on tenement houses, although not so striking to the public eye, is, nevertheless, a matter of the greatest importance, and has been patiently and perseveringly carried on by the board. The effect of this upon the health of the community inhabiting these houses will, doubtless, be made apparent during the present summer. It is reassuring in these days of cholera rumors to feel that work of this kind is going on. "The troublesome question of sewerage," and the inspection of meats, &c., are both alluded to in the report, and it is to be hoped that the board will soon find time to bring about a thorough reform in these very important matters. If it is necessary that greater powers should be given them to accomplish these ends, we trust that the public may be made to realize the necessity of these reforms without any such practical illustration as that which we enjoyed last winter. The report, though somewhat verbose, contains much that is instructive as well as gratifying to a citizen of Boston. We hope that it has been very generally read.

Disease of the Spleen in newly born Syphilitic Children.—M. Parrot, in the *Mouvement Médical*, states that newly born syphilitic children are subject to lesions of the spleen of two orders: one consists of enlargement, the other of inflammation which gives rise to false membranes around the capsule. He seeks to explain the augmentation of volume by the subordination of the vascular system of the spleen to that of the liver: for the latter organ being constantly affected by a special kind of cirrhosis in newly born syphilitic children, it follows that the spleen must become a reservoir for the blood which can no longer find a course through the liver.

As to the future of these lesions, M. Parrot is unable to speak positively for lack of sufficient observations; but he reports certain lardaceous alterations which have been met with at a more advanced age in those who were affected with syphilis at birth.

It should not be forgotton that our own countryman, Dr. Samuel Gee, noticed enlargement of the spleen in syphilitic children some years ago. Dr. Gee communicated a paper on this subject to the Royal Medical and Chirurgical Society in 1867. It was founded on observations made during the preceding four or five years.

The following is an abstract of the paper, which was entitled, "On Enlargement of the Spleen in Hereditary Syphilis and in some other Diseases of Children:"—

"I. In about one-fourth of the cases of hereditary syphilis, the spleen is much enlarged. Sometimes enlargement of the liver and lymphatic glands is superadded. The degree of splenic enlargement may be taken as a sort of index of the severity of the cachexia: the majority of cases with great enlargement die, but sometimes such children survive, the spleen gradually diminishing in size as the health improves, not diminishing, however, *pari passu*, with the improvement of health, but remaining for a long time a monument of past cachexia. Thus the spleen can often be felt in children three years old and upwards who bear the marks of past syphilis upon them. Sometimes an enlarged spleen is the only sign of an active syphilitic cachexia.

"II. In ague, also, it is sometimes the discovery of an enlarged spleen which first puts us upon the right scent, and enables us to detect the existence of ague which would otherwise be latent.

"III. Children in whom we can all but positively deny the existence of syphilis or ague occasionally acquire a greatly enlarged spleen, attended with a cachexia which is sometimes very profound. We can exclude leukemia, lymphatic anemia, rickets, idiopathic purpura, and primary disease of the liver in the cases referred to; whence it is inferred that children are subject to one or more cachexiæ not yet defined, or else that the known cachexiæ may present themselves shorn utterly of all the signs by which they may be recognized. For the cases in question, the name of simple splenic cachexia was proposed: the analogy with lymphatic anemia (Trousseau's adénie) was pointed out."—*The Obstetrical Journal of Great Britain and Ireland.*

TREATMENT OF CANCER OF THE UTERUS BY ERGOT AND ESCHAROTICS.—Dr. Milne, in a paper read before the Obstetrical Society of Edinburgh, claimed that the treatment of cancer of the uterus by the use of certain kinds of caustics was more satisfactory than by excision. The caustics recommended were the chloride of zinc, the nitrate of copper, and the dried sulphate of zinc; and the cases suitable were all those of encephaloid, carcinoma and epithelioma, where the cervix only was involved. One would not perform excision unless there was only a small portion of the cervix attacked by the growth, but the escharotic might be resorted to, and with benefit, when the disease was much more extensive.

As regards the mode of application of the caustics, the dried sulphate of zinc was to be first used, being applied to the cervix pretty freely through the speculum, the vagina being immediately thereafter plugged with cotton wool tipped at the uterine end with a little olive oil. This was to be applied until the slough came away, after which the cervix was to be injected with a saturated solution of nitrate of copper. This was done to attack any morbid cells lying beyond the sore from which the slough had separated.

In reference to the function of ergot given internally in cancer, Dr. Milne observed that it had usually been administered, and with benefit, as a hemostatic; but he believed it had another effect—it led to the atrophy of the uterus. This was an original observation which he claimed to have been the first to make. If it had this effect, then its therapeutic power was greater than had been previously imagined, and could not but be viewed as of great value in uterine cancer. It was not only important to diminish the afflux of blood to the uterus, and thereby combat uterine congestion—a condition present in malignant disease—but it was no less so to induce uterine atrophy. This atrophy was natural after the change of life, at which period cancer advanced more slowly; and if we could antedate it, it would be reasonable to suppose that the progress of the dire disease would be retarded. In point of fact he had found such to be the case.

By the use of ergot and escharotics he had cured two cases of cauliflower excrescence, and in three medullary ones he had retarded the disease at least. If only a postponing of the period of dissolution was all that could be achieved, yet this result was worthy of our most devoted efforts. The great drawback in uterine cancer was the late period at which it came under professional notice. Usually the whole cervix and contiguous parts were involved, and every form of treatment was thus debarred. Let it be seen when limited to a part only of the cervix, and there was every hope that the ergot and caustic treatment would frequently cure, and often mitigate the more distressing symptoms while postponing death.—*Obstetrical Journal of Great Britain and Ireland,* May, 1873.

Correspondence.

THE NEW ABATTOIR AT BRIGHTON.

MESSRS. EDITORS,—Most of the readers of the JOURNAL very well know that Brighton has always been, as a town, the principal abattoir of Boston. Its name has been distinctively associated with the sale and slaughtering of cattle; and the latter branch of industry has had anything but a sweet and wholesome savor in the minds of the people hereabouts. In the hands of the individual butchers, the trade became, for its notorious offensiveness, a perpetual thorn in the flesh to all residents of Brighton who were not engaged in butchering, and a passing reproach in the nostrils of all wayfarers. The stench hanging about these centres of pollution, contaminating the air of all the neighborhood, and the disgusting details of the business, the filth, the waste, the putrefaction of the offal and of other animal matters in the yards, or, worse still, in the piggeries adjacent to the slaughter houses, made a nuisance, of which, for a long time, there was no mitigation.

In vain did the town authorities expose the subject annually and attempt its reform; the butchers' guild was too strong to be disturbed through any of the existing processes of law. Then the State Board of Health was organized; and among the matters presenting for its deliberations, the slaughter-house nuisance of Brighton took an early and a prominent place. The various steps in the proceedings of this Board toward the abolition of the evil are of too recent occurrence to have been forgotten; they hardly need recital here. The matter was fully exposed in the first report of the Board, and the slaughtering business, as then carried on, was pronounced, unequivocally, to be an evil demanding immediate reform. Then the Legislature, moved by this Report, passed an act, incorporating an abattoir association; this act, the Brighton butchers, feeling tolerably well satisfied with their traditional habits of doing things, declined to take advantage of, and it became practically a dead letter for the time being. Then, because of this contumacy and indifference on the part of the butchers, special executive powers were imposed on the State Board of Health, under which the slaughter-houses were to be subject to the oversight of the Board, with the liability of being compelled to "cease and desist" if the Board considered them prejudicial to the "public health, comfort or convenience." At about this time, moreover, a butcher died in Brighton of septic poisoning caused by cutting his hand while dressing an ox which had died of disease, and it was discovered that half of the diseased animal was taken to Boston to supply the demand for roast beef. This somewhat startling incident aroused that lazy and frequently latent force called "public opinion"; and, with the Legislature and public opinion to support the reform, the State Board of Health saw itself in a fair way to effect a revolution. It used its powers judiciously, conscientiously and prudently, and at the end of the year reported upon twenty-three cases which had come under its executive action.

The result of all this has, of course, been salutary; but it is as yet only partial. The slaughter-house nuisances of Brighton have been modified, but not wholly abolished; a number of establishments still remain to remind people of what once existed. It is to be hoped that these will, sooner or later, be made to feel the power of that sanitary supreme court—the State Board of Health—and be compelled to pursue less obnoxious courses.

Another result, besides the immediate closing of the most offensive of the slaughter-houses, has been the establishment of an abattoir under the act alluded to above. The wholesome incursion of sanitary forces to Brighton, opened the way for the practical working of the proposed company. The "Butchers' Slaughtering and Melting Association" have completed their works, and they are now in operation. Your correspondent was curious to observe the details of this experimental innovation, and he takes the liberty of describing some of the features of the Brighton abattoir, the real monument of the persistent and praiseworthy efforts of the Health Board to abate a long-lived nuisance.

The situation of the establishment is excellent; it is immediately on the bank of the Charles river, and at a distance from any dwelling house. This latter advantage is, however, more an apparent than a substantial one, for, so far as any nuisance attending the slaughtering is concerned, the most fastidious landholder would not suffer in his sense of smell were he to reside under the very eaves of the new building. The feature which, at the outset and throughout, strikes the observer most is the pains taken to secure all the good results of cleanliness. The ventilation is excellent. The river supplies water in unlimited amount, and it is used lavishly. The sewerage is amply provided for, all waste of fluids passing at once through large pipes into the river below the buildings. The floors are all water-tight, those of wood being made like a ship's side, wood-fastened and caulked; while the whole ground-surface covered by the structure is cemented, except at the apertures for the sewers. It is to be observed that all these provisions, which are really the application of conditions imposed, under the law, by the Board of Health, are in no single direction made at a sacrifice of convenience, but rather they enhance in every way the facility of slaughtering. It is agreeable, also, to note that the yards and pens for the keeping of the cattle are all they should be.

To give an idea of the practical operation of this institution, let me follow the experience of an ox from the pen to the market on the one hand and to the tallow-barrel and fertilizer on the other.

The animal, entering the slaughtering-room through a door from a stall immediately adjacent, is killed on a water-tight floor; the throat is cut, and the escaping blood finds its way readily through one of the five round apertures to the cellar below. The hide and horns, hoofs, viscera, head, tallow and other offal, as soon as they are removed from the carcass, are tossed down through the openings, each part having its own place according to its destination subsequently—the hide and hoofs through one, the tallow through another, the contents of the intestines through a third, and so on. The creature, having been thoroughly cleaned, is divided, the apparatus for hoisting being run by shafting from the engine, and easily controlled in each apartment. The beef is then transferred to hooks which roll on an elevated tramway suspended from the roof; after cooling a little time, it is carried directly, and without removal from the circuitous railway, into the refrigerator, an ice-room being connected with each stall. This artificial cooling of the meat is considered especially advantageous.

Going into the cellar below, we find that large sheet-iron barrows have received the tallow, the offal and other refuse. This material is removed as quickly as it accumulates, and there is no opportunity for decomposition. The tallow goes to some rendering establishment, the hoofs belong to the glue-manufacturer, the hides are salted on the premises, the fluid waste escapes into the sewers, and all the rest—the viscera (first cleaned properly), the heads and all the refuse—is transferred to the great rendering house, where it undergoes processes which utilize what in ordinary slaughter-houses is thrown away. All this offal is emptied into large tanks heated by steam, and all the fat is melted out and drained off from the top of the boiling mass, making tallow of a second quality. The residuum, or "scrap," is then removed to the drying machinery, large cylinders, steam-heated, wherein the material is dried and, at the same time, pulverized ; when it is removed, it is mostly in the form of a dark-brown coarse powder, of great value as a fertilizer.

In this process of "rendering" there would seem to be ample opportunity for the development of offensive stenches. This nuisance does not appear, for the steam generated in the process is condensed in cold-water chambers, and the gases are conveyed by pipes into the fires of the boiler room where they are fully consumed. This disposition of the escaping steam and gas is found much more satisfactory than that practised elsewhere, of conveying them into an adjacent stream where they are condensed, but whence they also escape.

The advantages of this extensive abattoir, as compared with the ordinary slaughter-houses, are:—

1. Its cleanliness and freedom from nuisances. The person who knows he is buying beef or mutton from the Brighton abattoir may know that it was killed and dressed in a clean and decent fashion.
2. Its sewerage.
3. Its abundant water service.
4. Its mechanical appliances.
5. Its entire abhorrence of any thing like a slaughter-house pig-pen.
6. Its means of utilizing economically all that is commonly thrown away to decompose.

Do the butchers of Brighton readily accept the situation and see these advantages ? The answer to this is in the fact that all the stalls have been taken or are under negotiation ; and the company is encouraged to construct another large beef-slaughter house. The rendering-house is large enough to supply the demand for some years to come. If the butchers are wise they will greedily compete for places in the abattoir. At all events, the State Board of Health may, by law, compel the butchers to transfer their industry to this place, and may make very uncomfortable those who are incorrigible.

In a sanitary point of view, success is already assured ; it is to be hoped that the founders of the enterprise may find a satisfactory pecuniary profit for their labors, in proportion to the measure in which they have promoted the public welfare and the public health. Two innovations are still possible to increase the usefulness of this excellent enterprise—one economic, the other sanitary. These are the saving and utilization of the fresh blood for the manufacture of albumen ; and the appointment of an expert inspector of meat and cattle, so that no consumer of meat from this abattoir may be in doubt that he has wholesome steak and chop on his table.

This letter ought not to end without an acknowledgment of the courtesy of Mr. John N. Merriam, the President of the abattoir company ; it is most agreeable to find a gentleman whose practical common sense can find a compatibility between business enterprise and a regard for the public welfare.

June 28, 1873.

Medical Miscellany.

PUT WHERE IT WILL DO THE MOST GOOD.—The Cholera in the Ohio Penitentiary.

ACCORDING to the Philadelphia *Medical Times*, cases resembling cholera have appeared in that city, and in the west as far east as Cincinnati; also in Jersey city.

MEN AND CATTLE.—At a recent meeting of the Lincoln Town Council, Alderman Brogden thought it strange that the officer who had the inspection of the health of the people should receive only £15 per annum, while the inspector of cattle received £77:3:6. But no one seemed to think it strange "in an agricultural country"; and the only explanation given was, that the inspection of cattle was paid by fees in an expensive way.—*British Medical Journal.*

MME. CHATEAU, a *sage femme* of Vierson, has been awarded a prize by the Ministre d'Agriculture for her devotion during the small pox epidemic of 1870. Her vaccinations amounted to 400, and the re-vaccinations to 3,750.

TRANSFUSION OF BLOOD IN LEUKÆMIA.—In our number of May 24th, we mentioned that Mr. Callender had performed transfusion of blood on a patient suffering from leucocythæmia, and that he proposed to repeat it if successful. It has been repeated once since: several ounces of blood, taken from a stout-looking countryman, were injected. As in the first trial, the immediate results of the operation were encouraging, but it does not seem to have done much permanent good. The notes of this case will be looked for with interest in the *St. Bartholomew's Hospital Reports.—Brit' Med. Jour.*

AT the annual commencement, Amherst College honored our fellow-citizen, Dr. Nathan Allen, by conferring on him the degree of LL.D., a compliment which we are sure is not an idle formality. We think this degree is seldom given to members of the medical profession, but generally to persons distinguished by law and divinity—to judges, professors, authors, or scientific men. If conferred on medical men, it is in recognition of special attainments, and its rarity to physicians makes the honor more marked and noticeable. The late Dr. Dana, who for years was a chemist in the employ of the Merrimack Corporation, was the only resident of Lowell, previous to Dr. Allen, who ever received the distinction conferred by this degree. It affords us pleasure to record an act so complimentary to our well-known fellow-citizen. —*Vox Populi of Lowell.*

ACTION OF THE BOARD OF REGENTS OF THE UNIVERSITY OF MICHIGAN.—To answer numerous inquiries the following preamble and resolutions, passed by the Board of Regents at a late meeting, are published:

Whereas, The Legislature of the State of Michigan at its last session reenacted the law of 1855, requiring the appointment of Homœopathic Professors in the Medical Department of the University; and, whereas, it has always been claimed by the Board of Regents that the law was an infringement upon the rights and prerogatives of the Board; and, whereas, the Supreme Court of the State has refused to grant a mandamus requiring the Regents to comply with the law, thereby substantially confirming their action, therefore,

Resolved, That we maintain the position heretofore taken, and decline to make the appointments required by the law.

Resolved further, That we do this in no spirit of factious opposition to the apparent will of the Legislature, but because we believe the true and best interests of the University demand it.

Resolved, That we re-affirm the former action of the Board expressing a willingness to take official charge of an independent school of Homœopathy, and connect it with the University, whenever the means shall be provided for the payment of its professors.

THE *Students' Journal and Hospital Gazette* speaks as follows on the recent decision excluding female medical students from the University of Edinburgh.

"This decision is fatal to the hopes and aspirations of the ladies, as far as the University of Edinburgh is concerned; andwh ilst congratulating the male students of this seat of learning on the decision, we would ask the ladies not to feel discouraged, though Edinburgh will have none of them; the needy professors of Continental universities will welcome them joyfully, where they will be able to receive scientific education in mixed classes, sit in lecture theatres where men are exhibited *in puris naturalibus* to demonstrate the lectures, enjoy the charming society of their Russian sisters, and if so inclined may join secret political societies or become converts to communistic theories of *free love*, without any fear that the British Government will follow the example of the Russian authorities, by taking steps to prevent them from corrupting the morals of the youth of this country on their return."

THE SHAH'S PHYSICIANS.—The physician to the Shah of Persia, who is in attendance upon him during his European travels, is a Frenchman who has held that post for fifteen years, and is well known as a physician of eminence and research. M. Tholozan is a "Médecin Principal d'Armée" of the French army, and a "Membre Correspondant de l'Académie de Médecine de Paris." His best known works are on the origin and development of cholera epidemics. He has used his opportunities for studying this important question in Persia, which is one of the cradles of cholera. M. Tholozan is one of the most esteemed corresponding members of the Epidemiological Society of London; and the Council of the Society have gracefully recognized his services to epidemiology by inviting him to a banquet on Monday next at Greenwich. Dr. Dickson, who also accompanies the Shah, has been for many years in practice at Teheran, and, after acquiring a degree, was appointed to the Embassy. He had the skill and fortune to cure the Shah of an attack of fever which seized him during the absence of his physician in Europe, and which resisted the endeavors of native physicians.—*London Medical Record*, June 25.

ERRATA.—Page 57, sixteenth line from bottom, the first "hypoglossal" should read *glosso-pharyngeal*. Page 56, twentieth line from bottom, between "its" and "origin," insert *superficial*. Page 60, third line from top, for "shower baths" read *shower bath*. Page 60, twentieth line from the bottom, omit words "to be." For "Cym" read *Cyon* wherever the word occurs.

MORTALITY IN MASSACHUSETTS.—*Deaths in eighteen Cities and Towns for the week ending July* 12, 1873.

Boston, 128—Charlestown, 19—Worcester, 19—Lowell, 22—Milford, 4—Chelsea, 7—Cambridge, 17—Salem, 7—Lawrence, 21—Springfield, 6—Lynn, 11—Fitchburg, 4—Taunton, 3—Newburyport, 3—Somerville, 7—Fall River, 25—Haverhill, 9—Holyoke, 14. Total, 326.

Prevalent Diseases.—Cholera infantum, 56—consumption, 47—scarlet fever, 14—cerebro-spinal disease, 14.

Six deaths from smallpox occurred in Holyoke.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, July 19, 191. Males, 105; females, 86. Accident, 6—abscess, 1—apoplexy, 1—anæmia, 1—inflammation of the bowels, 3—bronchitis, 2—inflammation of the brain, 1—congestion of the brain, 1—disease of the brain, 8—cyanosis, 1—cancer, 1—cerebro-spinal meningitis, 1—cholera infantum, 43—consumption, 29—cholera morbus, 2—convulsions, 3—debility, 1—diarrhœa, 4—dropsy, 3—dropsy of the brain, 4—drowned, 3—dysentery, 1—diphtheria, 2—erysipelas, 1—scarlet fever, 14—typhoid fever, 3—gangrene, 1—gastritis, 3—disease of the heart, 3—intemperance, 1—disease of the kidneys, 2—disease of the liver, 4—leucocythæmia, 1—congestion of the lungs, 3—inflammation of the lungs, 3—malformation, 1—marasmus, 10—old age, 2—pleurisy, 1—premature birth, 1—rheumatism, 2—sunstroke, 1—scrofula, 3—smallpox, 1—disease of the spine, 2—suicide, 1—spina bifida, 1—tabes mesenterica, 1—unknown, 3.

Under 5 years of age, 121—between 5 and 20 years, 11—between 20 and 40 years, 26—between 40 and 60 years, 15—over 60 years, 18. Born in the United States, 152—Ireland, 27—other places, 12.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

NOTES ON THE PNEUMOGASTRIC.

By J. F. ALLEYNE ADAMS, M.D., Pittsfield.

(Continued from page 78.)

Influence of the Pneumogastric upon the Stomach.—As early as 1801, Bichat observed that irritation of the pneumogastrics produced contraction of the muscular coat of the stomach. This fact has been confirmed by Tiedemann, Gmelin, and more recently by Longet. The last named author has likewise observed that these contractions are very marked during stomach digestion, but are wanting when the stomach is empty. He has also found that irritation of the splanchnic nerves, while it produces movements in the intestines, does not affect the stomach. When the pneumogastrics are irritated, the contractions of the stomach are tardy, resembling the action of the sympathetic nerves upon unstriped muscular tissue. From these facts, Longet concludes that the motor nerve-filaments of the stomach, although contained in the pneumogastrics, are derived by anastomosis from the sympathetic system. We have already seen that the pneumogastrics receive, in the neck, a large supply of sympathetic fibres, from the cervical ganglia.

The effects of *section* of the pneumogastrics upon the stomach have been clearly demonstrated by Bernard. He found that upon division of these nerves, the contractions of the muscular walls instantly ceased, the mucous membrane lost its turgescence and became pale, the secretion of gastric juice was arrested and the sensibility of the organ was abolished. Schiff, however, has found that the movements of the stomach, although immensely diminished in activity, are not entirely abolished, for substances may still be very slowly passed to the pylorus. These movements he attributes to local irritation of the intramuscular terminal nervous filaments. It has been asserted by Tiedemann and Gmelin, that digestion, arrested by section of the pneumogastrics, may be, to a certain extent, reëstablished by galvanization of the peripheral extremities of the divided nerves.

Section of the pneumogastrics effectually prevents the action of emetics and cathartics. This fact has been established, and its causes most thoroughly investigated, by Prof. Horatio C. Wood, Jr., of Philadelphia, in a most elaborate and conclusive series of experiments.* These were fifty-one in number, upon dogs, cats and rabbits, most of them being vivisections; and the results may be concisely stated as follows:—

1. After section of the pneumogastrics, the largest doses of such emetics and cathartics as arsenic, tartar emetic, veratria, croton oil, gamboge and calomel, with rare exceptions, failed to produce vomiting or purging.

2. In these cases, there was no secretion of gastric or intestinal mucus, whose production in large quantities is the usual result of these drugs, and is essential to their action.

3. These results are not due to non-absorption of the medicines, for these and other poisons produce death quite as speedily as when the nerves are not divided.

4. The absence of purging cannot be explained by failure of muscular action, for the peristaltic action of the bowels continues, after section of the pneumogastrics.

5. One probable explanation of this phenomenon lies in the accumulation of carbonic acid in the blood; for animals, hypodermically injected with veratria, but with nerves intact, immersed in an atmosphere of carbonic acid, died without vomiting or purging. This cannot be the sole cause, however, for enough carbonization of the blood is required to produce insensibility, while, after section of the nerves, vomiting and purging are prevented, long before this stage is reached.

6. A second cause is probably the interference with the circulation of the lungs backing up the blood in the pulmonary artery, consequently in the right heart, and finally in the portal circulation, arresting the action of the mucous glands.

7. A third cause is perhaps shock.

8. The opposite results obtained by Brodie and Reid may be explained by the occasional failure of section of these nerves to affect the pulmonary circulation.

Dr. Wood, therefore, attributes the stoppage of vomiting and purging by section of the pneumogastrics entirely to arrest of the secretory function of that nerve, but seems to leave out of the question the reflex function of the medulla oblongata, by which gastric irritation is transmitted from the pneumogastric to the phrenic nerve, and which doubtless contributes to emesis, in those cases where the emetic is given by the stomach. In these cases, the irritation of the emetic transmitted to the medulla by the centripetal fibres of the vagus, excites simultaneously the secretory filaments of that nerve, filling the stomach with mucus, and the excito-motor fibres of the phrenic, causing spasmodic contraction of the diaphragm. In cases of cerebral vomiting, the emetic influence seems to be transmitted at first, entirely through the phrenic, hypersecretion not commencing until the stomach is emptied of its alimentary contents; and, in the case of some of the most prompt emetics, such as sulphate of zinc and turpeth mineral, the reflex action upon the phrenic doubtless precedes that upon the secretory filaments of the pneumogastric.

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* Horatio C. Wood, Jr., "On the Influence of Section of the Cervical Pneumogastrics upon the Action of Emetics and Cathartics."—*American Journal of Medical Sciences.* Vol. ix. 1870.

In this connection, it will be interesting to consider the relation of the pneumogastric to the etiology of migraine or sick-headache, especially since the subject has been so clearly and beautifully brought to the notice of the profession by Dr. Anstie in his work on neuralgia, and also in recent numbers of the *Practitioner*.* Concerning the nature of this distressing and obstinate affection, the most diverse opinions have been and are still held. Of recent writers, we find Du Bois Reymond maintaining that it is due to a tetanic condition of the vaso-motor nerves of the affected side of the head, the pain being analogous to that felt during tetanic contraction of voluntary muscles, or the unstriped muscles of the uterus, intestines, &c. Moellendorf, on the other hand, thinks that hemicrania is based on the appearance of a paralytic condition of the vaso-motor nerves controlling the carotid artery of one side, which causes relaxation and distention of the arteries of the brain. Dr. Anstie differs from both of these writers in calling migraine a trigeminal neuralgia, a view which has, of late years, been pretty generally held by the profession in England. There is one essential point, however, in which Dr. Anstie takes an independent position, and that is, in locating the primary lesion in the medulla oblongata, instead of the chylo-poietic viscera, as is more commonly believed. Migrainous pain, he contends, means an atrophic molecular irritation in the trigeminus root, and migrainous vomiting means a similar process in the vagus root. That is to say, an irritation in the floor of the fourth ventricle, being propagated in one direction by the trigeminus, gives rise to pain, and in another direction by the vagus, upsets the stomach. He admits the frequency of simple dyspeptic headaches, with vomiting and a foul tongue; but a true migraine he describes as a trigeminal neuralgia, complicated with vomiting, though the tongue is clean, occurring at regular intervals, induced by over-fatigue, and not by over-eating, beginning in early life in persons whose family history shows nervous disease, and passing off in middle life, or merging into some other form of nervous affection, as epilepsy, asthma, angina pectoris, or persistent facial neuralgia. In accordance with this view, his treatment is strongly tonic; fasting is discountenanced, and the patients are put upon an abundant diet, with cod-liver oil. Drastic cathartics are considered pernicious, as weakening the digestive power, and reducing the general strength. The indications during an attack, he maintains, are entirely for the relief of pain and production of sleep. For this purpose, he relies chiefly upon caffeine, given by the mouth if it can be borne, otherwise hypodermically. If this fail, he resorts to the hypodermic use of morphia. Dr. Allbutt* replies to Dr. Anstie, contending that gastro-hepatic disturbance plays the most important part in the production of this affection; but the difference between these two gentlemen seems to be chiefly one of classification, for the cases which Allbutt considers typical are not admitted by Anstie to be true migraine. In this country, I am sure but a small minority of the sick-headaches can be classed under Anstie's definition of migraine, for the most frequent cases appear to be such as Chambers† so graphically describes, and which are dependent upon the centripetal rather than the centrifugal function of the pneumogastric.

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* F. E. Anstie. Neuralgia and its Counterfeits. London: 1871.
Ibid. A Clinical Lecture on Migraine. *Practitioner*, November and December, 1872.

The researches of Dr. Waller, of Geneva,‡ upon the effects of compression of the cervical pneumogastrics, for the relief of various nervous affections, have been reserved for the close of this paper, as they bear upon all three of its divisions. Although the cases reported are few, they possess a strong interest, both in reference to the importance of the results and the physiological mechanism whereby these results are obtained. He reports five cases illustrating the effects of pressure upon persons in health, and four cases in which it was applied as a therapeutic agent. The pressure is applied with the thumb, over the carotid artery on one side, usually a little below the angle of the jaw, the thumb being moved until a sensitive spot is found, which he considers indicative of the presence of the vagus. It will be remembered that the nerve lies in the posterior groove between the carotid artery and the internal jugular vein. The symptoms produced in his own case are thus described: "A moderate pressure soon occasions a deep-seated sensation, of a peculiar benumbing character, in the head, which scarcely amounts to pain." Then follows "a sense of languor and of fainting, as if 'going off,' which is so manifest that, if the head and body be not supported, and if pressure on the nerve be continued, complete syncope ensues. Simultaneously, other symptoms of a respiratory, cardiac and gastric nature make their appearance. The respiration, at first arrested for a few moments, becomes heaving and retarded; the heart's action, depressed in force, is disturbed and irregular, as may be felt by the pulsation of the carotid, under the finger. The gastric symptoms are marked uneasiness over the stomach, sometimes amounting to nausea and even vomiting."

In the other cases, the effects were similar, but the heart's action was reduced in frequency as well as in force. In two of them, the cheek and ear of the side upon which pressure was made were observed to be paler and of lower temperature than those of the opposite side; and in one, there was slight protrusion of the eyeball.

These symptoms Waller attributes to an irritation by pressure of the trunk of the pneumogastric and the cervical cord of the sympathetic, which lies beneath it, so that it is impossible to make firm pressure upon the one without also pressing upon the other. By comparing these symptoms with the effects of galvanization of these nerves, we find them to be identical. The retardation of the heart's pulsations, and the slow, heaving respiration result from irritation of the inhibitory nerve-fibres of those organs in the vagus; the diminution of arterial pressure is due to irritation of the depressor nerve, and the nausea may arise from irritation of gastric nerve-fibres, or may be wholly or in part dependent upon the faintness. The pallor and reduction of temperature of the cheek and ear, and protrusion of the eye-ball, are symptoms referable to irritation of the sympathetic, being among the characteristic symptoms of Basedow's disease, an affection whose primary lesion is in the cervical sympathetic ganglia, or the adjacent cilio-spinal centre of the spinal cord. The peculiar benumbing sensation in the head is probably caused by cerebral anæmia, from irritation of vaso-motor nerves. With regard to the faintness and nausea, it is difficult to say which nerve contributes the most to them, for they may be induced by galvanization of either the vagus or sympathetic. Waller lays the most stress upon the irritation of the vagus; but, as it is impossible to press upon this, without also pressing the sympathetic cord, the two sets of symptoms are necessarily simultaneous and liable to confusion.

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* Clifford Allbutt on Migraine. *Practitioner*, January, 1873.

† On the Indigestions. 1870.

‡ Augustus Waller. On the Effects of Compression of the Vagus Nerve, in the Cure or Relief of Various Nervous Affections. *Practitioner*, April, 1870.

Previous writers, who had made use of pressure upon the neck, supposed its effects to be due to obstruction of the arterial or venous circulation, and Dr. Waller himself shared this belief until 1861, when he became convinced that these phenomena are of purely nervous origin. Dr. Parry, of Bath, was the first to apply practically, in the early part of this century, what he termed compression of the carotids, for inducing sleep, and for the immediate relief of attacks of hysteria and epilepsy; but long before his day, Aristotle had written "that if the veins of the neck become compressed exteriorly, one sees a man shut his eyes and fall down senseless, as if he were strangled, although he is not so." But Waller shows that compression of the carotid arteries will not induce the symptoms described, adducing the fact that, in animals, both carotids may be tied, without producing any disturbance of the heart's action, or of innervation. In man, too, the ligation of one of the carotids gives rise, in the great majority of cases, to no immediate symptoms of a marked character, the secondary symptoms which occasionally supervene, such as convulsions, coma, collapse, &c., being of a totally different nature, and generally attributable to lesions of the brain. In those rare cases in which impaired eyesight and syncope have immediately followed the ligation of the artery, it is likely that the vagus or sympathetic nerves, or both, have been included in the ligature; for, when such is the case in animals, the symptoms are found to be similar. Ligation of the internal jugular vein has also been frequently performed, without any peculiar symptoms resulting, although a case is within my knowledge where ligature of one of these veins, for hemorrhage, was followed by coma of three days' duration. Even in this case, it is not unlikely that the nerves were included in the ligature. Simultaneous compression of both internal jugulars would undoubtedly produce some cerebral congestion, whose symptoms would, however, differ essentially from those described by Waller; but it is probable, from the manner in which the pressure is made by him, that the circulation in these veins is but slightly, if at all, impeded. Taking these circumstances in connection with the known effects of irritation of the vagus and sympathetic nerves, we may safely conclude that Waller's views are sound, and a valuable addition to medical science.

The cases which he reports, in which a therapeutic application was made of compression of the pneumogastric, are not sufficiently numerous for generalization, but are very striking and suggestive. In one of them, violent nervous disturbance of the heart, with hysterical symptoms, came on in a lady suffering from an attack of acute rheumatism. Compression was made, first of one vagus, and afterwards of both. In a few minutes, the agitation had subsided, the heart's action became quieter and more regular, and finally, all the nervous symptoms subsided. A few minutes afterward, she sank into a steady sleep and, on awakening, was perfectly quiet, and the cardiac symptoms never re-appeared.

Another case was that of a lady, who, in consequence of a fall on the previous day, had severe neuralgia of the head and back, hyperæsthesia of the ulnar and median nerves, much mental excitement, a small pulse, at eighty, and frequent fits of obstinate vomiting. Pressure was applied to the left vagus. The result was perfect quietude, with laborious breathing, for about ten minutes; pulse weak and irregular. After removing the pressure, the pulse fell to seventy, and became full and regular, the patient lying quiet, and apparently unconscious, for upwards of ten minutes more. When she came to her senses, the vomiting had ceased, and did not return. The pain and excitability had left. The fulness of the pulse remained for some hours.

A third case was that of a lady with an irritable stomach, the sequela of gastritis, who had frequent attacks of spasmodic vomiting. One of these attacks was quieted by Dr. Waller, by pressure on one of the vagi, and subsequently the patient acquired the habit of making the pressure herself, when nausea came on, and always with the effect of quieting the stomach and preventing emesis.

The fourth and last case was that of a young lady who had suffered for several months from a severe hemicrania, recurring periodically, every day. In this case, Dr. Waller resolved to make use of pneumogastric compression as a "perturbating" agent, as he expresses it, and, to that end, while the patient was in the sitting posture, made strong compression of both vagi. Syncope occurred immediately, and she remained quiet and unconscious for two hours, although the respiration and heart's action were regular. The result was, that she had had, in the two years intervening between this treatment and the report of the case, not the slightest return of the hemicrania.

We ought not to leave Waller's pressure method without referring to Rothroch's cases of the therapeutic application of *ice* to the neck, in the region of the pneumogastric.* This was done in cases of hysterical delirium, one being idiopathic, and the other following the use of an anæsthetic; and also in a case of suspended respiration, in etherization. In all the cases, the application was immediately followed by a deep, heaving respiration, and restoration to consciousness, with muscular relaxation. There was no faintness, however, as is the case when pressure is made; and no mention is made of any retarding of the heart's action. It is difficult to tell in what way the ice acted, in these cases. Dr. Rothroch supposes that it, in some way, supplied the *besoin de respirer*, and that shock, also, was a not unimportant factor. Shock, however, was not the sole agency, for when the ice was applied to the *head*, no effect was produced. This mode of treatment is so easily applied, that it is to be hoped it may be given a general trial.

In closing this paper, it need only be said, that the fear of adding unduly to its length has necessitated the omission of much that properly belongs to the subject, such as the relations of the pneumogastric to the larynx and to the liver, and the various forms of pneumogastric neuralgia. The object of the essay will have been accomplished, if it has succeeded in reviewing, with clearness and accuracy, the most recent investigations concerning some of the more obscure functions of the vagus; and, while showing what brilliant results have already been accomplished, indicating the yet unopened mines of wealth that remain for the reward of future explorations.

THE EDINBURGH MEDICAL LADIES IN THE CRIMINAL COURT.—The Edinburgh lawers have been fluttered somewhat by the steady pursuit of knowledge by the Edinburgh medical ladies in the criminal court of that city. It seems they feel a deep interest in the proceedings of the Court, and have been a welcome audience until the other day, when it was thought necessary to send the macer to them with the information that evidence was about to be given not fit for ladies' ears, and they had better therefore retire. This, however, they declined to do. A man was then sworn, and, on being asked to detail the injuries inflicted on him (it being a case of filthy assault), appealed to the Court that he could not explain while those ladies were present. But the Court was helpless to expel them and they declined to go. With many blushes, and in faltering accents, the witness then told his sorrows, but we suppress the details.—*Medical Times and Gazette,* May 17, 1873.

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* J. T. Rothroch. Ice to the Neck in Hysteria, and also in Suspended Respiration *Philadelphia Medical Times,* Vol. iii., No. 53, p. 67.

Progress in Medicine.

REPORT ON MENTAL DISEASES.

By T. W. Fisher, M.D.

Since the scientific work of Griesinger, the philosophical one of Maudsley, and the practical one of Blandford, no general treatise on insanity has appeared. Many books, lectures, monographs and papers of great variety and interest in special departments, have, however, shown an increasing attention to the study of mind in its relations to the brain in health and disease. In the half dozen pages allowed this report, we can do no more than mention a few of them, leaving the reader to explore for himself the paths pointed out. It is impossible to summarize progress on such a subject satisfactorily.

MENTAL SCIENCE.

Illustrations of the Influence of the Mind on the Body. By Daniel H. Tuke, M.D., M.R.C.P. Lea: Philadelphia. 1873. 400 pp. 8vo.

Body and Mind: The Gulstonian Lectures for 1870. By Henry Maudsley, M.D. London: MacMillan & Co. 1870. 12mo. pp. 189.

The Principles of Psychology. By Herbert Spencer. New York: Appleton. 1872. 3 vols. 12mo.

Mind and Matter, or Psychological Inquiries. By Sir Benjamin Brodie, Bart., D.C.L. New York: Wood & Co. 1873. 12mo. pp. 280.

Mind, Brain, and Spinal Cord: The Croonian Lectures. By C. B. Radcliffe, M.D., &c. *Lancet and Brit. Med. Jour.*, March, *et seq.* 1873.

Unconscious Action of the Brain and Epidemic Delusions. Popular Lectures. By W. B. Carpenter, M.D., F.R.S. Estes & Lauriat. Boston. 1873.

Purely metaphysical speculation is at a discount, and is carefully avoided in the work of Tuke. He gives a long series of instances in which the mind affects the body—properly classified under its three grand divisions—assigning to the intellect 154, to the emotions 243, and to the will 33. These range from cases of disordered sensation, to paralysis and death. The preponderating influence of the emotions corresponds with the well-known primary character and frequency of moral and emotional forms of mental disorder.

Dr. Maudsley treats the same general subject in a less objective manner. He says, "we know not what mind is, but we are bound to investigate, in a scientific spirit, the laws of its functions." "Volition, we know, but the will, apart from particular acts of volition, we do not know." "Impressions made there (on the nerve cells of the hemispheres) are the physiological conditions of *ideas;* the feeling of the ideas is *emotion,* for I hold emotion to mean the special sensibility of the vesicular neurine to ideas; the registration of them is *memory;* and the reaction to them is *volition. Attention* is the maintenance of the tension of an idea; *reflection,* the successive transference of energy from one to another."

Spencer's elaborate application of the principles of positivism to psychology, is too learned, and too logical, to be neglected by any reader, however prejudiced against his system of philosophy. He attempts to show that in an ultimate analysis of the relations of mind and body, a nervous impulse may become identical with a unit of consciousness, or if not, that they at least *look* like two sides of the same thing.

Sir Benj. Brodie, whose book was recently noticed in this JOURNAL, would consider such views as rank materialism. He says, "when the materialist argues that we know nothing of mind except as being dependent on material organization, I turn his argument against himself, and say that the existence of my own mind is the only thing of which I have any absolute and positive knowledge." Also, "the properties of mind are so wholly different from those of matter, the two are so completely asunder, that they do not admit the most distant comparison."

Dr. Radcliffe, in his first lecture on Mind, vs. Spirit, thinks the phenomena of *memory* show that impressions are made on some less perishable and shifting material than the cerebral cells; that the mind goes out to find the records of memory *everywhere.* He opposes the positivists and argues that mind keeps the brain together, and the body alive.

Dr. Carpenter's first lecture shows how great a portion of our life consists in unconscious cerebration, which may be counted unconscious *mental* action by some—yet mind, without consciousness, seems to be a contradiction in terms. A new book by R. R. Noel, on "The Physical Basis of Mental Life" (Longmans, 8vo. pp. 74), has just appeared in London, but I can learn nothing of it, except that it is a popular essay. No doubt we advance slowly in the construction of a rational mental science, but the fundamental question still eludes the keenest research. We may hope, however, for further progress in this direction.

ANATOMY AND PHYSIOLOGY OF THE BRAIN IN RELATION TO MENTAL DISEASE.

The Physiology of Man. By Austin Flint, Jr., M.D. Vol. iv. Nervous System. Appleton & Co. New York. 1872. 8vo. 470 pp.

The Structure of the Cerebral Hemispheres. By W. H. Broadbent, M.D.—*London Journal Mental Science,* April, 1870.

The Origin and Signification of the Symptons of Brain Disease, and the Mechanism of Diseases of the Brain. Two Lectures. By C. E. Brown-Séquard, M.D.—*Archives of Scientific and Practical Med.,* N.Y. 1873.

Mechanism in Thought and Morals. By Oliver Wendell Holmes. Boston: Osgood. 1871.

On the Pathological Anatomy of Paralytic Diseases of the Mind. By Dr. H. Obersteiner. Vienna. *Virchow's Archiv.* Vol. lii. Also, *Jour. Psychol. Med.,* N.Y. Oct. 1871.

The Supraorbital Convolutions. By Dr. Weissbach. *Wiener Med. Jahrbuch.* Also, *Annales Medico-Psych.* Paris: Juillet, 1872.

Clinical Lectures on Mental and Cerebral Diseases. By J. Crichton Brown, M.D. See notice of first lecture on "Brain Wasting." By Geo. E. Day, M.D.—*Jour. Psych. Med.* Oct., 1871.

Notice of some of the results of very recent experiments in Cerebral Physiology. By David Ferrier, M.D. — *British Medical Journal,* April 26, 1873.

Anatomical Investigation of Epilepsy and Epileptiform Convulsion. By Dr. J. H. Jackson.—*British Medical Journal,* May 10, 1873.

Of the Functions of the Cortical Layer of the Great Hemispheres. By Meynert. *Prager Viertelschrift,* 1872.

Some account of the opinions of Griesinger, Van der Kolk, Carpenter, Jaccoud, Schiff, Clark, Jackson, Broca and others, will be found in this Journal, vol. vi. pp. 129, 145, 161 and 177. Flint, in his chapter on the cerebrum, gives a *résumé* of the accepted conclusions of physiologists in regard to the functions of the different cerebral centres. He bases his account of the anatomy of their fibrous connections on the researches of Luys (Paris, 1865), at the same time expressing some doubt of his entire reliability in detail. The existence of a complicated system of transverse fibres, uniting convolutions and parts of convolutions, and of converging fibres between the cortex and basic ganglia is clearly demonstrated. Dr. Broadbent describes these fibres with minuteness. He finds that the radiating central fibres, as he calls them, are not distributed to *all* the convolutions, but that considerable tracts of the cortex are isolated, their cells only communicating with those of neighboring convolutions, by transverse fibres, arranged conveniently for transference of energy in a lateral direction. This structure, with the intricate anastomosing of the cell fibres, provides an apparatus for the organization of associated ideas, impressions and movements.

It is agreed that the grey matter of the hemispheres is the seat of mental operations, but great difficulty has been experienced in locating any special class of ideas. This may have arisen from too great dependence on *destructive* lesions and *destructive* experiments, which give negative rather than positive results. The experiments of Dr. Ferrier, of the West Riding Asylum, mentioned further on, are likely to throw great light on this question of localization. Brown-Séquard has recently insisted on this difficulty of inferring the location of cerebral functions from the place of lesion. Reflex and inhibitory influences, from distant parts of the brain, give no clue, in the absence of a precise knowledge of nervous connections, to the special convolution affected.

Reflex insanity, from coarse central lesions, is not the most frequent form. Anæmia, hyperæmia, neurasthenia, blood changes, and even organic changes of a microscopic nature, may directly affect the cortex and give rise to mental disturbance. The changes of cerebral texture seen in chronic insanity are often secondary, but they may indicate the seat of the original disorder. In general paralysis, for instance, they confirm a belief in the location of the mental functions in the cortex. Dr. Obersteiner divides paralytic imbecility into two stages—1. *Stage of Exudation.* Serous exudation and lymph corpuscles extravasated from the vessels into the perivascular spaces and cerebral substance. Commencement of paresic phenomena, confined to the brain and shown chiefly in mental weakness. 2. *Stage of Formation of Connective Tissue.* The lymph corpuscles organize into connective tissue; the activity of the nervous elements becomes more and more interfered with; atrophy, complete mental decay, spread of paralytic phenomena, marasmus.

Dr. Weissbach finds in the brains of 15 insane persons the supra-orbital convolutions little accentuated with a tendency to blend. Dr. Meynert finds, in General Paralysis, the frontal convolutions most atrophied. This every one must have noticed who has made many autopsies in this disease. Dr. Brown says, "brain wasting" is common to general paralysis and to senile decay. He thinks it is seldom general and uniform, but thinks it begins, and is invariably most advanced in the marginal, the ascending frontal and ascending parietal gyri, from which it spreads to the superior frontal gyrus, and the postero-parietal and supra-marginal lobules. The gyri of the occipital lobes rarely participate. The wasting originates in the cortex and spreads to the ganglia at the base, except in those rare cases of propagation from the spinal cord, which Dr. Foville describes *(Annales Medico-Psych.,* Nov. 1872).

As the sequence of mental phenomena is quite regular and well defined in general paralysis, we may infer that the anterior convolutions are the seat of memory, of reason, and of the self-feeling, so sure to be exalted in this disease. The early existence of slight aphasia and agraphia in many cases, goes to confirm a belief in the frontal gyri, as the seat of memory of words.

The results of some very recent experimental researches in cerebral physiology, by David Ferrier, M.D., may be found in the *British Medical Journal,* April 26, 1873. In a notice of experiments on guinea-pigs, rabbits, cats and dogs, after the plan of Fritsch and Hitzig, he concludes:—1st. The anterior portions of the cerebral hemispheres are the chief centres of voluntary motion, and the active outward manifestation of intelligence. 2d. The individual convolutions are distinct centres for different movements. 3d. The action of the hemispheres is generally crossed. 4th. The different epilepsies are, as Dr. J. H. Jackson supposes, "discharging lesions" of these different centres. 5th. Chorea is of the same nature. 6th. The corpora striata are centres chiefly for the flexor muscles of the opposite sides; when irritated, pleurosthotonos occurs. 7th. The optic thalami, fornix, hippocampi majores and convolutions adjoining have no motor signification. 8th. The corpora quadrigemina are concerned in vision and movements of the iris, and are centres for the extensor muscles of the head, trunk and legs; when irritated, opisthotonos occurs. 9th and 10th. The cerebellum regulates the movements of the eye-balls, and maintains the equilibrium of the body. 11th. Nystagmus is a cerebellar epilepsy.

Dr. J. H. Jackson speaks in the most hopeful terms of Dr. Ferrier's novel method of experimenting *(British Medical Journal,* May 10, 1873). He says the plan of *discharging* the separate convolutions by the direct application of electricity, gives results unattainable by the *destruction* of the same parts. He accounts for the absence of paralysis in the latter case, and the existence of convulsions in the former, by the following ingenious speculation. He says the study of hemiplegia shows that *each* part of the corpus striatum represents movements of the *whole* of the parts which that organ governs. The convolutions are the corpus striatum "raised to a higher power." Each part, &c., represents the whole of the movements, which have been represented in the corpus striatum; so then, if *any* part of the cortex in this region be destroyed, there is no loss of movement; but if any one part be strongly discharged, many movements are developed. The convolutions, then, are seen to be centres of the most complicated associated movements and impressions, many times organized under various combinations. Monkeys are soon to be experimented on to determine the functions of homologous convolutions in man.

SPECIAL FORMS OF MENTAL DISEASE.

Essai de Classification Methodique des Maladies Mentales. Par A. Foville. *Annales Medico-Psych.*, Juillet, 1872.

The Pathology of Hysteria. *Med.-Chirurg. Rev.*, Oct., 1872. (Editor.)

Reynolds' System of Medicine, Vol. II. See Articles on Insanity, Hypochondriasis, Hysteria, Ecstasy, Catalepsy, Somnambulism, Alcoholism, Chorea and Epilepsy.

On Epilepsy, by Le Gonzalez Echeverria, M.D., Univ. Paris. Wood & Co.: New York. 1870.

Influence du Rheumatisme sur le Character. Par le Dr. Faure. *Archiv. Générales.* Sept., 1871.

Effects of Meteorological Facts on Insanity. By the Rev. Thos. E. Crallan, M.A., Chaplain to Sussex Co. Lun. Asylum. 13th Rep.

Discussion sur Alcoholism. Par la Société Medico-Psychologique. Paris. *Annales Medico-Psych.* Sept., 1872.

On Intemperance in its Medical and Social Aspects. Dr. Eastwood. *Brit. Med. Jour.*, 1871.

De l'Alcoholism au point de vue de l'Alienation Mentale. Par M. le Dr. H. Dagonet. *Annales Medico-Psych.* Mars, 1873.

Genealogical Study of Hereditary Insanity. Esquirol Prize for 1868. By M. G. Doutrebente, M.D., Paris.

Délire des Grandeurs en dehors Paralysie Générale. Esquirol Prize, 1872. By M. H. Tagnet, M.D. Paris.

Le Delire des Persecutions. Par M. Le Grand du Saulle. Paris, 1871. pp. 524. 8vo.

Cancer of the Brain. J. C. Brown, M.D. *Brit. Med. Jour.* Apr. 19th and 26th, 1873.

De l'Anorexie hysterique. Par le Dr. Lesègue. *Archiv. Gen.* Avril, 1873.

Dr. Skae's attempt at pathological Classification (*Edin. Med. Jour.* Nov. 1870) was a decided advance on the old divisions of Esquirol into Mania, Melancholia, Dementia, &c. It is so useful, I am tempted to give it.

Idiocy. } Moral and
Imbecility. } Intellectual.
Insanity with Epilepsy.
Insanity of Masturbation.
Insanity of Pubescence.
Satyriasis.
Nymphomania.
Hysterical Mania.
Amenorrhœal Mania.
Post-Connubial Mania.
Mania of Pregnancy.
Puerperal Mania.
Mania of Lactation.
Climacteric Mania.
Ovario-Mania.
Senile Mania.
Phthisical Mania.
Metastatic Mania.
Traumatic Mania.
Syphilitic Mania.
Delirium Tremens.
Dipsomania.
Mania of Alcoholism.
Post-Febrile Mania.
Mania of Oxaluria, &c.
General Paralysis.
Epidemic Mania.
Idiopathic Mania.
Sthenic and Asthenic Mania.

Foville's more recent attempt is less practical, if more scientific.

He makes four classes:—First, insanity *without*, and, second, insanity *with* special anatomical lesions. General paralysis is the only form he is able to place, with confidence, in the second class. Third, acquired cerebral and intellectual infirmities (atrophies and dementias). Fourth, congenital infirmities (idiocy, imbecility and cretinism). The first class would necessarily include most cases of recent mental disorder arising from reflex excitation or inhibition; from cerebral exhaustion and from blood changes of quantity and quality, such as hyperæmia, anæmia, spanæmia and the various toxic conditions.

Uterine specialists and alienists are at variance in regard to the pathology of certain mental symptoms often classed as hysteria. The former are undoubtedly furthest from the truth. Briquet, according to the editor of the *Review* above mentioned, considers hysteria a "perversion of the vital acts which manifest the affections and passions"; in other words, it is a form of moral insanity. Dr. Hewitt, in every sense a gynæcologist, says:—"Hysteria is not necessarily associated with disease or derangement of the generative organs of either sex." Dr. Reynolds says:—"The hysteric state is essentially one of mental perturbation." . . . "The uterine disorders coincident with it are more commonly the effect than the cause." The writer in the *Review* says hysteria is a failure of nerve power from various causes, mental and physical, occurring in women, not because they have wombs, but from their naturally more unstable nervous system. Visceral lesions, he thinks, are often secondary.

Dr. Radcliffe's second lecture, on the signs of incipient insanity, is in point. He says want of self-control, or will-power, and disturbance of the affective nature are fundamental, intellectual disturbance being secondary. This is true of hysteria, which he calls *neuriasis*. Under physical symptoms, he enumerates: causeless laughing and crying, globus, *besoin d'uriner*, flatulence, tender spots at pit of stomach, under left nipple and over dorsal spine (the *trépied hysterique* of Briquet), spasms, periodicity, &c. &c. Under mental symptoms: self-sensitiveness, feebleness of will, fancifulness, unbalanced spirits, feeble sense of moral obligation, &c. &c. He says the names *hysteria* and *hypochondria* are misnomers. The name should include the mental as well as the physical symptoms, since the latter are the effect of the former.

Dr. Radcliffe's third lecture treats, in a very interesting way, of cerebral and spinal exhaustion, common sources of nervous and mental disturbance, but generally complicated with blood changes whose special influence it is hard to distinguish. Of the toxic conditions, alcoholism is the most frequent cause of insanity. Dr. Skae mentions three forms, and Dr. Eastwood seven arising from this cause. The scrofulous, cancerous, syphilitic, gouty and rheumatic diatheses each induce mental disease with special peculiarities worthy of study. Uræmia and kindred states are common causes. Malaria, lead poisoning, heatstroke, each gives a peculiar impress to mental disorder. In our climate, the effect of the weather, on rheumatic subjects particularly, has not received due attention. Mr. Crallan has arranged the results of four years of observation in a lunatic asylum in a diagram, placing admissions, deaths, accession of epileptic fits, relapses of mania, melancholia, &c., so as to be easily compared with wave lines of temperature, solar radiation, amount of ozone, rain, wind, &c. Two hundred and seven of two hundred and twelve fits were preceded or accompanied by marked change of pressure or radiation. He thinks it is the change of weather, at the changes of the moon, which affect epileptics. Alterations of the electric state of the atmosphere have been neglected. Every hospital or weather station should have a captive balloon, with silk cord and electrometer.

Heredity is the predisposing cause in most cases of insanity. It may be so powerful as to give rise to insanity without apparent exciting causes. M. Morel makes hereditary insanity a special variety, and this idea is supported in the essay of Dr. Doutrebente. Bad conformation of the head is a prominent feature, especially a bi-lateral flattening. (See A Ready Method of Cranial Comparison, this JOURNAL, Feb. 16, 1871.)

TREATMENT.

Insanity and Insane Asylums. Report of E. T. Wilkins, M.D., Commissioner for California on Asylums in Europe and the United States. 1872.

Transactions of the American Association of Medical Superintendents of the Insane. See *Am. Jour. of Ins.*, vols. xxv.–xxx.

Asiles specieaux pour les Ivrognes. Par Foville. *Annales Medico-Psych.*, July, 1872.

Report of Committee of Medico-Psych. Association on a Plan for the uniform recording of Cases of Insanity and their Medical Treatment. *Jour. of Ment. Sci.*, July, 1873.

The Medical Treatment of Insanity. T. S. Clouston, M.D. *Jour. of Ment. Sci.*, April, 1870.

Insanity and its Treatment. By G. Fielding Blandford, M.D. Oxon. Philadelphia: Henry C. Lea. 1871. Pp. 470. 8vo.

The Physiological Action of Conium Verigo. *Allg. Med. Cent. Zeit.*, July 8, 1871.

Conium in the Treatment of Acute Mania. By J. Crichton Brown, M.D. *Lancet*, June, 1872.

Conium in the Treatment of Insanity. By Daniel H. Kitchen, M.D. *Am. Jour. Ins.*, April, 1873.

Bromide of Potassium in Epilepsy. By Le Grand du Saulle. *Allg. Med. Cent. Zeit.*, No. 27, 1871. Also Riedel, No. 37, and Lutz in *Berlin. Klin. Wochenschrift*, No. 18, 1871.

Ergot of Rye in Mental Diseases. By J. C. Brown. *Practitioner*, June, 1871.

Ergot in the Treatment of Nervous Diseases. By Daniel H. Kitchen, M.D. *Am. Jour. Ins.*, July, 1873.

Letters from Geo. Fielding Blandford, M.D., in *Psychological Jour.*, January, April, July and October, 1872.

Subcutaneous Injection of Morphia in Psychoses. Dr. Wolff. *Archiv für Psych.*, Feb., 1871.

Electricity in Psychiatry. Dr. Rudolph Arndt. *Archiv für Psych.*, February, 1871.

The Temperature in General Paralysis of the Insane. W. J. Mickle, M.D. *Jour. of Men. Sci.*, April, 1872.

Ophthalmoscope in Diseases of Nervous System. By T. Clifford Allbutt. London and New York. 1871. Pp. 405. 8vo.

Ophthalmoscopic Examination of sixty Patients in the State Asylum, Utica, N. Y. H. D. Noyes, M.D. 1872.

The Ophthalmoscope in Mental and Cerebral Diseases. Mr. Aldridge. Also, The Sphygmograph in Lunatic Asylum Practice. Mr. Thompson. *West Riding Reports.* 1872.

Passing by all questions relating to home, cottage or hospital treatment, for the sake of abbreviation; also, the subjects of mechanical restraint and separate asylums for habitual drunkards and criminal insane, we come at once to the strictly medical treatment of insanity. The above subjects will be found fully discussed in the first two documents mentioned. That important part of treatment which consists in the personal moral influence of the physician over his patient, hardly admits of consideration in this place.

Dr. Blandford believes thoroughly in the efficacy of medical treatment in insanity, and is supported by the great majority of practical alienists. This belief has a sure foundation in the fact of the physical basis of all mental disorder. Dr. Blandford treats very satisfactorily of diet and bathing. He advocates forcible feeding for patients who refuse their food because of supposed dyspepsia, with a foul tongue, fœtid breath and loaded bowels. Dyspepsia is almost always the *result,* and not the *cause* of nervous depression. The fullest diet, with stimulants, often effects a speedy cure. (See page 206.) That a full diet is required in most cases, might be inferred from the impoverished state of the blood, as shown by examination. (See *Lancet*, May 3, 1873, on the Histology of the Blood in 143 Insane.) The proper method of forced alimentation is discussed at length (pp. 215 to 224). Dr. Moxey, in *Lancet*, May 31, 1873, defends his "Nasal Method of Enforced Alimentation." It is a pity such methods cannot be availed of for the thousands of patients, in ordinary practice, who slowly and persistently starve themselves. For a very able analysis of the most common form of voluntary starvation, see the paper of Dr. Lesègue on Hysterical Anorexia *(Archives Générales*, April, 1873). It is beyond question that patients are constantly allowed to die of simple starvation through a slipshod expectancy in treatment. In hospitals, the much-dreaded bugbears of mechanical restraint and enforced feeding save more lives than any other single agencies.

Of bathing, Dr. Blandford speaks in qualified praise. He thinks there is risk of too great depression from hot baths of long duration, as used by the French. He prefers, in mania, a bath of 92°, and suggests allowing it to cool while the patient is in it, thus avoiding shock. Dr. Lockhart Robertson strongly advocates the wet sheet in recent mania, frequently applied and long continued. Dr. Blandford intimates that a large part of the benefit derived is from the very efficient *mechanical restraint* it affords. Dr. Wilkins comes to the conclusion, in his report, that baths are overestimated, and perhaps abused, in France, and too much neglected in this country. Dr. Skae, of Edinburgh, and Dr. Blanche, of Paris, have, after years of experiment, discontinued the warm bath in acute mania, on account of occasional fatal results.

Tonics, stimulants and laxatives are required in most cases of insanity. The underlying diathesis should be medically treated also. On the use of sedatives, some difference of opinion exists, though most alienists rely on them largely, and with good results. No doubt, they are open to great abuse, as Dr. Maudsley affirms, especially when the chemical restraint of drugs is substituted for a rational use of mechanical restraint, as is the case in some English hospitals, under the pressure of popular feeling.

Opium must still retain the first place in the treatment of melancholia of the subacute form. It has a directly curative effect which chloral has not. Dr. Wolff bases its use on sphygmographic indications, which show that a full dose, after a short period of irritation, acts by paralyzing the vaso-motor nerves. Its use is followed by general relaxation, cessation of agitation, diminished painful nervous sensations, and by psychical and corporeal calm. The dose should be carefully individualized, and should be small when the pulse is already slow and venous system relaxed, as in old age, paralysis, fatty heart, &c.

Chloral is universally employed as the most valuable known hypnotic. It is better suited to cases where excitement exists, though it produces sleep in cases of depression. It may be given to advantage by the rectum. Dr. Madden prefers it to opium in puerperal mania, in doses of from ten to thirty grains. *(Brit. and For. Med.-Chir. Rev.*, Oct., 1871.) Mr. Aldridge examined three patients under the influence of chloral, and found, first, increased vascularity of the retina, followed by anæmia, the condition characteristic of healthy sleep, thus confirming Dr. Hammond's observations (On the Physiological Effects and Therapeutical Uses of Chloral, *N. Y. Med. Journal*, Feb., 1870). Though the treatment of mania is assisted by chloral, the disease seems to run a definite though modified course in spite of it. Hence the objection to pushing the remedy to extremes, with a view to cut short the disease, as is often attempted in ordinary practice. I have good reason to know the frequency and danger of this error. Dr. Maudsley, in his address before the Royal College of Physicians, August, 1871, referring to the use and abuse of sedatives, says he is opposed to giving chloral every three or four hours, and reserves its use for bedtime.

Of the extreme value of the *bromides*, especially in epilepsy, perhaps enough has been said in the medical journals of late. For their physiological effects, the reader is referred to the papers mentioned and to Drs. Clarke and Amory's recent monograph.

Hyoscyamus is a valuable and reliable sedative; belladonna is less so, and cannabis indica least of all, though Dr. Clouston strongly recommends the latter in combination with bromide of potassium.

Conium has recently been largely experimented with, and its effects on the temperature and pulse carefully noted. Dr. J. Crichton Brown finds it of great value in mania from its effect on the motor centres. He has observed that the corpora striata participate in the usual vinous staining in patches seen in death from exhaustive mania. He thinks it soothes the irritated and exhausted centres of motor activity, without affecting the mental excitement directly. He finds the average duration of treatment, in twelve cases of recovery from mania treated by conium, to be one hundred and two days; in twelve cases treated by other sedatives, one hundred and fifty days. Dr. Kitchen demonstrates, by thermometer and sphygmograph, its effect in reducing the temperature and pulse, and gives cases showing its effect on muscular activity.

Ergot was found useful by Dr Brown in (1) recurrent mania, (2) chronic mania with lucid intervals, (3) epileptic mania. Dr. Kitchen used it to advantage in headaches, both from plethora and anæmia of cerebral vessels, in mania, epilepsy and delirium tremens. He gave it in half dram doses of the fluid extract, or three to six grains of ergotine before meals. He found it did not affect the temperature, but increased the frequency and tension of the pulse. It was shown by Mr. Aldridge to contract the minute arteries of the retina when taken continuously for several days.

Nitrite of Amyl was found to increase the size of the small arteries when at the height of its action.

The use of the ophthalmoscope becomes more and more evident as observations accumulate. The work of Dr. Allbutt, noticed by Dr. Jeffries in his late Report on the Progress of Ophthalmology, will serve as a text-book for the general practitioner, to be supplemented by the more recent investigations of Dr. Noyes, Mr. Aldridge and other observers. No space is left to speak of electricity in its application to mental disease. All the text-books on electro-therapeutics, except that of Drs. Rockwell and Beard, give a chapter to this subject. Electricity is certainly valuable in treating such complications as neuralgia and paralysis, and as a general tonic. Its direct application to the head, with a view to definite effects upon the brain, must be considered as rather empirical at present.

JURISPRUDENCE OF INSANITY.

The Medical Jurisprudence of Insanity. By Isaac Ray, M.D. Fifth Edition. Boston. Little, Brown & Co. 1871. 8 vo. pp. 645.

The Medical Jurisprudence of Insanity. By J. H. Balfour Brown, Esq. London. Churchill. 1871. 8 vo. pp. 333.

Etude Medico-legale sur La Folie. Par A. Tardieu, M.D. Paris. Baillière et Fils. 1872. 8 vo. pp. 610.

On the Scientific Value of the Legal Tests of Insanity. By G. R. Reynolds, M.D. London. 1872.

The Psychology of Criminals. By J. B. Thompson, M.D., Resident Surgeon to General Prison for Scotland, at Perth. *Jour. of Men. Sci.*, October, 1870.

Mania Transitoria. By Dr. Krafft-Ebing. Erlangen. 1868. Also, Theory of Moral Insanity. *Friedreich's Blätter für Gerichtliche Medizin.* 1871.

Criminal Responsibility of Epileptics. By M. G. Echeverria, M.D. *Am. Jour. of Ins.*, Jan. 1873. Also, Violence and Unconscious States of Epileptics, &c. April, 1873.

For some reason, Dr. Ray, one of the most conscientious and conservative of writers, has the reputation, in certain legal circles, of being the leading advocate, if not the author, of what is called the "modern doctrine of insanity." By this is meant the doctrine of moral, emotional or affective insanity. Dr. Ray's division of mania into intellectual and moral, general or partial, is no innovation or novelty. Moral insanity was described by Pinel, early in this century, and has been recognized by every alienist of repute from that day to this. The only difference of opinion has been the theoretical one, whether, in the frequent cases where no intellectual derangement is observed, it does not really exist. This, some claim, must be the case, from the supposed unity of mind, it being impossible, as is maintained, for one of its three grand divisions of intellect, emotion and will, to be affected separately. Dr. Ray's division is practical and not theoretical. It should always be remembered that the term *moral* is the French *morale*, and includes the character and conduct as influenced by the passions and emotions, as well as by the sense of right and wrong. Simple melancholia is a common example of moral insanity, as it often exists without delusion, even when accompanied by suicidal and homicidal impulse.

The book of Balfour Brown is not quite a *medical* jurisprudence, since its author approaches his subject with something of a legal bias. He, however, admits the same divisions and forms of mental disease given by Dr. Ray. M. Tardieu also recognizes similar distinctions. His book is further valuable for thirty cases, involving medico-legal inquiry. He gives several examples of the "mania of persecution" (see book of Le Grand Du Saulle before mentioned), of which rather common form of disease, Little, the Dix Island murderer, was the victim (State of Maine, Knox Co. vs. Little, 1872). He gives also fifteen *fac similes* of the writing of the insane (see also *Jour. Men. Sci.*, Jan., 1871).

Alienists have long held the time honored legal tests of responsibility in little esteem, and there is a growing distrust of them in judicial quarters, leading here and there to decisions more in consonance with truth. Judge Doe, in a careful review of the subject, denies that there are any well established legal tests of insanity, contradictory precedents annulling each other (see State of N. H. vs. Jones, Andover, N. H., Aug. 12, 1872). Henry L. Clinton, Esq., however, goes out of his way to abuse experts, Dr. Ray particularly, to deny the "modern doctrine of insanity," and to re-affirm the tests of "delusion" and "knowledge of right and wrong" (see argument before Judiciary Com. of N. Y. Senate, April 15, 1873).

Dr. Reynolds's little book shows clearly upon what inadequate scientific grounds these ancient tests repose, and suggests a commission from the legal and medical professions, for the arrangement of some common basis of opinion, and for the settlement of the method of employing experts and other questions of a practical nature.

The hereditary nature of crime and the low mental status of criminals is very ably discussed and illustrated by Dr. Thompson. His paper, as well as the extensive work of Dr. Despine *(Psychologie Naturelle, &c.* 3 vols. Paris. 1868) on the same subject, should be more widely known.

Mania transitoria finds a defender in Dr. Krafft-Ebing, who gives illustrations of seven conditions under which it may occur:—1. The state of dreaming. Of this form, the case of Albert J. Tirrell, defended successfully by Rufus Choate, twenty-five years ago; and the recent case in New Hampshire, of the homicidal boy somnambulist, Fitts, are examples. 2. Different kinds of intoxication. 3. The delirium of fevers. 4. Transformed neuroses, such as epilepsy, chorea, asthma, neuralgia, hysteria, &c. 5. The transitory psychoses (see Dr. Jarvis's Memoir in the *Am. Jour. of Insanity*, July, 1870). 6. Pathological passion. 7. Transitory intellectual troubles at childbirth. Mania transitoria, in some or all its forms, has been recognized by every writer of note for fifty years. The relations of epilepsy to legal medicine are fully treated by Dr. Echeverria, of New York.

Bibliographical Notices.

Mineral Springs of North America: How to reach and how to use them. By J. J. Moorman, M.D., Physician to the White Sulphur Springs; Professor of Medical Jurisprudence and Hygiene in Washington University, Baltimore; Member of the Medico-Chirurgical Society of Maryland; of the Baltimore Medical Association, &c. Philadelphia: J. B. Lippincott & Co. 1873. 8vo. pp. 294.

The Mineral Springs of the United States and Canada, with Analyses and Notes on the Prominent Spas of Europe, and a List of Sea-Side Resorts. By Geo. E. Walton, M.D., Lecturer on Materia Medica in the Miami Medical College, Cincinnati; Committee of the Medical Association of the State of Ohio on "Therapeutics of Mineral Springs." New York: D. Appleton & Co., 549 & 551 Broadway. 1873. 8vo. pp. 390.

Several years ago, it fell to our lot to notice, for the Journal, the admirable work of Dr. John Bell on Baths, and which must always remain one of the "standard" productions upon the topics of which it treats. Both the writers whose works we are now about to introduce to the readers of the Journal, refer with respect to Dr. Bell's pages, and are careful, throughout, to credit all other authors duly.

It is somewhat remarkable that two works so nearly alike in their subject, scope, and aims, should be almost simultaneously published. An attentive examination of both leads us to highly commend them, for carefulness of preparation, thorough research, and full information upon the points which they examine. Both writers seem to be animated by an honest purpose, and to take a lively interest in the important facts and questions which they consider. Dr. Moorman, whose character and reputation as a physician, are, we presume, well and widely known, has had almost a life-long experience as a resident, professionally, "throughout the watering season" at the White Sulphur Springs of Virginia, upon the value of whose waters we have no need to expatiate, since their virtues are so universally known and appreciated. We believe in the conscientious and careful perusal of Prefaces and Introductions, and are constrained to say that Dr. Moorman's opening pages of this sort are well worthy of attention, although we do not like, nor do we see the necessity for, their caption, viz., "To the Public." This may be a trifle not worth commenting upon, but, in our opinion, it is a blemish upon an otherwise unexceptionable book, which should have been introduced to the world without even a suspicion of the *ad captandum* style. However this may be considered, we do not doubt the sincerity of the author's concluding sentence, in his address "To the Public"—"upon the honest integrity with which they (his opinions) have been formed, the invalid, the profession and the general public may rely."

Dr. Moorman has not—as the title of his volume sufficiently indicates—restricted his researches to the Medicinal Springs of Virginia. Chapter I. is devoted to the consideration of "Mineral Waters in General," and is valuable and interesting. We are somewhat struck, *en passant*, with the copious use of italics in this chapter, and indeed throughout the volume—an undesirable feature, typographically and generally.

Dr. Moorman is to be commended for the straightforward and sensible terms in which he treats of the use of "mineral waters in general"—in some of the earlier pages of his book particularly. Of course, the teaching is not new, from the mouths and pens of medical men, but as the "Public" sadly need instruction upon these points, and that continually, we are glad that they can have the opportunity to be guided by such correct sentiments. The following extracts are specimens of the prevalent tone of remark in the direction to which we have alluded. "Mineral waters are not a *panacea;* they act like all other medicines, by producing certain *effects* upon the animal economy, and upon principles capable of being clearly defined. It follows that there are various diseases and states of the system to which they are not only *not adapted,* but in which they would be eminently injurious" (p. 25). "To one familiar with the many errors and mistakes committed in the use of mineral waters in this country, it will not seem wonderful that numbers return from visiting our most celebrated watering places without having received any essential benefit, but be rather a matter of surprise that so large an amount of good is achieved." * * * * "It is a subject of daily and painful observation, at all our principal watering places, to witness numerous individuals using mineral waters that are not adapted to their cases; and still more common is it to see those, to whose cases they are adapted, using them so improperly as entirely to prevent the good they would accomplish under a proper administration" (p. 28). We not only heartily endorse the foregoing remarks, from personal observation, but in addition would signalize the absurdity, so constantly committed at all watering-places, of visitors who are perfectly well, and who come chiefly for pleasure-travel, or to mingle in the gaieties of these resorts, imbibing resolutely, largely and constantly, the medicinal waters. The somewhat ludicrous, though to the individual concerned, rather trying and melancholy, experience of a young man misguided in this manner, and which we witnessed in one of our earliest visits to Saratoga, recurs vividly to our remembrance. Rising early for three successive mornings, he swallowed cup after cup of water from the sparkling fountain—reaching the acme of distention of his stomach on the third morning, when that overcharged viscus relieved itself by an abundant cascade, returning to the surface of Mother Earth most of the liquid just appropriated from her bounteous internal resources! We need hardly add that this hydraulic display was not exactly the *finale.* Our imprudent friend had gripings, many and sore, in the abdomen, and action as if from Glauber's salt for nearly an entire day. His digestion was disturbed, more or less, for a week, and he left the Springs in a ferocious and surly mood, to seek diversion elsewhere. He would have passed his time very pleasantly at Saratoga, if he had let the water alone. He had no need, whatever, for any medication, whether by "mineral waters" or through other vehicles. It is the "old story" over again—much as it is with regard to health-seeking climatically considered—no suitable advice is taken—people dash or creep about the world in a purposeless way, nearly sure to make egregious mistakes, and a thousand times to wish themselves at home. Nothing more easy than to avoid this by being in the first place "sure you're right," before you "go ahead." Consult a conscientious and competent physician, before running at random the round of travel in pursuit of health, or drinking in reckless succession all the waters of the earth. Only last season, at Sharon Springs, N.Y., whose waters are confessedly powerful and have benefited large numbers of people, we witnessed the most undoubted bad results from needless, ill-directed and over-use of the waters, both internally and in bathing.

It would prolong this article beyond admissible or desirable limits, were we to touch, even, upon the various topics fully treated of in both the volumes under consideration. In Dr. Moorman's book, of course, particular attention is directed to the merits of the Virginia Sulphur Springs, and every information required, it would seem, is given. Between pages 62 and 63, we have a resplendent green *parterre*, with winding walks in white, and this is a "Bird's Eye View of the White Sulphur Springs"—a sort of Complete Guide for the traveller or invalid resident; and, in the very centre of this elaborate picture, we find "Dr. Moorman's office" carefully indicated—this for safety. Close by, is the "Old Ball Room," and not far off a monster "Hotel"; "Music Stands," Lovers' "Walks," "Leaps" and "Rests"—this latter portion of the map a veritable study in its minute subdivisions!

Dr. Walton's book takes a wide range, and seems to have been studiously and carefully prepared. The author says, in his "Preface," that he has endeavored to arrange all the known facts concerning mineral waters in such manner that they shall be readily accessible (p. vi.). He has, for this purpose, examined the works of the best European authors, and has enumerated the medicinal waters of our own Continent. Very thorough analyses of the waters are to be found in both the volumes we notice—more especially, perhaps, in that of Dr. Walton. The latter writer begins his work with an "historical" chapter, and concludes it with one on "Sea-side Resorts." There seems to be an equally honorable and enlightened view of the subject in Dr. Walton's mind as we have accorded to Dr. Moorman; and we cannot do better, perhaps, than to support our assertion by one or two extracts. "Invalids should, as a rule, consult the resident physician on arrival at the Springs, who should be familiar with the precise action of the water, and adjust the dose to the varying conditions. For this purpose the patient should bring with him a statement of his case from his physician, which will enable the resident physician more readily to possess himself of complete knowledge of the course of the disease. Unfortunately, many of the physicians at springs in this country are there for a single season only, and therefore have not the inducement to become thoroughly acquainted with the action of the water, which is secured by permanence. Proprietors of Springs will do well to give close attention to the medical efficiency of their resorts. We cannot refrain from suggesting the impolicy of proprietors or physicians encouraging or permitting patients to remain when the waters are manifestly inapplicable to the disease. Neither is it advantageous for proprietors to advertise their waters as curative of a large number of maladies for which they have no special application. The springs are thus reduced to the level of quack nostrums, and the trifling present gain of such a course is more than counterbalanced by the loss of reputation which the water suffers by failure to cure or relieve" (pp. 116, 117). There are several "Skeleton Maps," very well executed, and sundry illustrations, besides, in Dr. Walton's volume.

The maps are of portions of the country in which springs notably exist, and the latter are carefully indicated. Both volumes give directions "how to reach" the springs in the various sections of the country, and nearly always very correctly. To go to Sharon Springs, N. Y., it is not, now, necessary to take stages from Palatine Bridge—as Dr. Moorman's book states—as the rail goes through to Sharon, by branch from the main track from Albany.

To sum up :—1. Whilst it is easily demonstrable that simple water, one of the best gifts of Providence to mankind, may, like other liquids of greater potency, be abused, so, like them, it clearly has its uses.

2. Mineral waters are often agents of great power, and require care and judgment on the part of the prescriber and of the consumer.

3. Those who use these waters should do so under the advice of competent physicians; and, in addition, they will find a nicely printed Guide-Book and *répertoire* not amiss. So, let them furnish themselves with one or both of the volumes we have been examining; and, if they go into their neighborhood, be sure to consult their authors.

4. Let mere tourists, without special ailments, let mineral waters alone.

Some precautions like the above will bring medicinal springs into better repute and truer usefulness, and they will not—as they nearly always have been—be only, or chiefly, useful (or instrumental) in filling the pockets of sharp landlords, agile bar-tenders, impudent carriage-drivers, indifferent bath-servants or thriving gamblers.

We must not conclude without commending the Publishers of both volumes for the very excellent manner in which the printing, illustration and binding are done; and, as a last compliment to both authors, we thank them for their full and satisfactory indices.

W. W. M.

BOOKS AND PAMPHLETS RECEIVED.

New Remedies, a Quarterly Retrospect of Therapeutics, Pharmacy and Allied Subjects. New York: William Wood & Co. July, 1873.

Wharton & Stillé's Medical Jurisprudence. 3d Edition. Philadelphia: Kay & Brother. 1873. 2 vols.

On Marienbad Spa and the Diseases Curable by its Waters and Baths. By Appollinaris Victor Iagielski, M.D., Berlin. London: Trübner & Co. 1873. Pp. 185.

Annual Reports of the Board of Visitors, Trustees, Treasurer and Superintendent, of the New Hampshire Asylum for the Insane. Nashua: Orren C. Moore, State Printer. 1873.

An Eye Case in the Courts. By C. A. Robertson, A.M. (Harv.) M.D. Albany: The Argus Co. 1873. Pp. 21.

Fifteenth Annual Report of the Medical Superintendent of the Nova Scotia Hospital for the Insane. Halifax, N. S. 1873. Pp. 72.

The Unity of Natural Phenomena. From the French of M. Emile Saigey, with an Introduction and Notes by Thomas Freeman Moses, A.M., M.D. Boston: Estes & Lauriat. 1873. Pp. 253.

On Yeast, Protoplasm and the Germ Theory. By Thomas H. Huxley, F.R.S.

The Relations between Matter and Force. By Prof. John H. Tice, of St. Louis. Boston: Estes & Lauriat. 1873. (Both from the Publishers.)

Boston Medical and Surgical Journal.

Boston: Thursday, July 31, 1873.

During the past few weeks, all doubt as to the existence of cholera in this country has passed away. It has shown the same erratic character as in previous epidemics, seizing upon certain localities, killing and dispersing the inhabitants, and in a few weeks subsiding, and transferring its ravages to another place. Meanwhile, its general advance northward and eastward is quite evident. That it will, ere long, reach the great cities of the Atlantic seaboard must be regarded as extremely probable. The duty of the hour is to prepare to meet it by scrupulous cleanliness in all our crowded towns. Our profession are the natural guardians of public health, and will always be found ready to assist the authorities in this work for the preservation of life. There has not been a time during the past quarter of a century when this influence could be used to such advantage as in this present summer of 1873.

A writer in a Washington paper has recently suggested a novel method of cooling and purifying the air of large cities during the heated term. The waste-water of fountains was to be sent one or two hundred feet into the air in the form of fine spray or vapor, by powerful machinery intended to force it through a form of atomizing apparatus. The temperature of the air is said to be materially lowered by the presence of this vapor, which also greatly increases its purity by the removal of all dust particles with which the air may be charged. Although no such wholesale system as our ingenious friend suggests may prove to be feasible, there is no doubt that much might be done to make our cities more comfortable and attractive during the hot weather than they now are, and we are glad to see that people are beginning to realize it. It is doubtless a difficult task to cleanse an atmosphere charged with every possible sort of impurity which has accumulated during a dry term. We can, however, do much to prevent this contamination of the air by attacking the sources whence the dust particles arise. The more dangerous of these are already, in this city, being properly attended to by our Board of Health. The cellars and vaults are purged of their filth, but why should not our streets and thoroughfares which are frequented by all classes of the community be kept in a condition more conducive to their health and comfort? We cannot help feeling that no greater step can be taken towards beautifying and rendering attractive a large city, to say nothing of the effect upon its health, than in an improved system of keeping its streets clean and free from dust. We have yet to learn in this respect much from certain European cities. The system by which the French capital is kept in such superb condition is perhaps the most perfect that exists, and we would recommend it to the attention of our city fathers. The streets in that city are daily swept and watered, and a large array of workmen are permanently employed to keep them in proper repair. In this city, a street once made is supposed to run itself for an indefinite period, is rarely swept and never watered by the city. Would not the beauty of the city, the value of its property and the health of its inhabitants be enhanced by such an improvement. It would necessitate undoubtedly a large appropriation, but we think it would pay.

RARE DISEASE OF THE EYELIDS.—Dr. Argyll Robertson describes a rare affection of the eyelids, which he denominates elephantiasis of the lids. In the case which came under his observation, the disease appears to have begun as an ordinary œdema, but had endured for several years even after repeated and various treatment. Further, there was little pitting on pressure, and no œdema in any other part of the body, nor was there any sign of cardiac or renal disease. The swollen condition of the lids had the unfortunate effect of narrowing the field of vision, and thus interfering with the patient's occupation, on which account it was proposed to remove a considerable portion of the hypertrophied skin.—*Edinburgh Medical Journal.*

Correspondence.

NEW ORLEANS, LA., July 11th, 1872.

MESSRS. EDITORS,—During the past ten days, our city has been without the usual Gulf breezes which render our nights cool and refreshing and moderate the fierce heats of a sub-tropical summer. Several cases of sunstroke have occurred, and in one, in which the temperature was noted, it was found to be 112° in the axilla at the moment of death.

As a general rule, sunstroke is much less common in New Orleans than in Philadelphia and New York. This difference appears to be due to the more uniform temperature, the wide streets, the great extent of ground occupied by the city along the banks of the greatest river in the world, the prevalence of cool, refreshing Gulf breezes, the large rain-fall, and the absence of any very great crowding of the population in New Orleans.

Up to the present time, New Orleans has been free from yellow fever. During the past two years, yellow fever has prevailed "sporadically" during the months of August, September and October. In 1867, the epidemic of yellow fever affected the entire city, and though an immense number of cases occurred (estimated by some as high as 80,000), the mortality was small, being only 3,107 in a population of near 200,000. Preceding this epidemic, the citizens and Confederate soldiers, who had suffered a temporary absence during the civil war, returned, and there was also considerable influx of emigrants and strangers. It is supposed that the greater proportion of the population of New Orleans, who were susceptible to the action of the poison of yellow fever, were affected at this time; and the subsequent exemption of the city from the pestilence is referable chiefly to the fact that there has subsequently been no great influx of emigrants and strangers.

The temporary check in the natural growth of this important city, by additions from Northern and Western States and from Europe, has been referred, by some, to bad government and such an enormous increase of taxation as to render the possession of real estate an actual calamity.

The deaths from yellow fever during the past five years were as follows:—in 1868, 3; 1869, 3; 1870, 587; 1871, 52; 1872, 39.

The relative mortality to the number of cases has been great during the past two years; thus, in 1871, of 114 cases, officially reported, 54, or nearly one half, terminated fatally; in 1872, of 83 cases, 39 proved fatal.

The circumscribed nature of the yellow fever of 1871 and 1872 cannot be justly referred to any improvement in the sanitary condition of the city, nor to any measures for the arrest of the disease, for the manifest reason that the disease has, at various times in the history of New Orleans, been limited in a similar manner; thus, in 1844, there were 148 deaths; in 1845, 2 deaths; in 1846, 160 deaths; 1850, 107 deaths; 1851, 17 deaths; 1856, 74 deaths; 1859, 91 deaths; 1860, 15 deaths; and 1866, 185 deaths from yellow fever.

The attempts to decry a just system of quarantine, upon such slender and uncertain data as those furnished by the limited prevalence of the disease in 1871 and 1872, is scarcely worthy of serious consideration, much less of an extended discussion. A similar remark is applicable to the so-called sanitary measures, which some have vaunted as the cause of the limitation of the disease in 1871 and 1872. We are in favor of the most rigid sanitary measures and of the most carefully conducted experiments; but we are opposed to hasty conclusions drawn from a limited experience of two or three years.

During the past six months of the present year (1873), meningitis has prevailed to such an extent as to attract some degree of consideration; 79 whites and 41 colored (total, 120) having fallen victims to this form of disease. As far as my experience extends, cerebro-spinal meningitis (epidemic meningitis) is characterized by true inflammatory symptoms; viz., elevation of temperature, derangement of digestion, aberration of nervous and muscular phenomena and increase of fibrin in the blood. *Post-mortem* examinations have confirmed previous observations, that the disease consists essentially of an inflammation of the arachnoid and pia mater of the brain and spinal cord. Unlike the true fevers, the blood is charged with fibrin, and fibrinous deposits are formed within and around the inflamed meninges of the brain and spinal cord. The fatality attending this disease must be referred to the character of the organs involved, and also to the destructive effects, caused by the effusion of coagulable lymph and inflammatory products, within the cavity of the cranium and spinal cavity. Cerebro-spinal meningitis is to the membranes of the brain and spinal cord what pleuritis is to the investing membrane of the lungs. It should be classed with the phlegmasiæ, in which there is an actual increase in the fibrin of the blood, and not with the pyrexiæ, in which this element is deficient. The treatment which has yielded the best results in my hands, has been the application of blisters to the back of the head and along the spine, purgatives and the alterative action of mercury in combination with opium and quinine. The bowels are freely opened by means of calomel and injections, and the patients are kept, during the active stages, under the influence of small doses, at regular intervals, of calomel, quinine and opium. From one-fourth to one-half of a grain of opium, in combination with one grain of calomel and two grains of quinine, are administered to adults every three or four hours. Hydrate of chloral and bromide of potassium, administered in medium doses at short and regular intervals, proved beneficial in some cases, in addition to the remedies just mentioned. The diet should be light, but nutritious—beef-tea and milk, and, when the pulse is feeble and rapid, milk punch. It should be remembered, that when the active inflammation subsides, convalescence is necessarily protracted and tedious, in cerebro-spinal meningitis, on account of the efforts of the fibrinous effusion upon the functions of the brain and spinal cord. It is important, therefore, that the strength should be sustained by the judicious use of tonics and alcoholic stimulants, and by good diet, during the protracted convalescence. The absorption of the inflammatory products may be promoted by iodine and iodide of potassium. After the subsidence of the active inflammatory symptoms, the loss of muscular power and paralysis which remain, in some cases, may be relieved by the careful use of electricity.

The recent epidemic of cholera, which commenced in the early part of February and disappeared in the latter part of June, was less severe than in the two previous visitations of this pestilence in New Orleans. Although the fatal cases were marked by the prominent symptoms of Asiatic cholera, and presented, upon *post-mortem* examination, its characteristic lesions, the vast proportion of the cases, "when taken in time," yielded readily to treatment, and the mortality has been comparatively small. Thus, during the months of February, March, April, May and June, 117 whites and 116 blacks (total, 233) died from what was registered in the official mortuary reports as cholera sporadica; and cholera morbus and cholera infantum destroyed 62 whites and 22 colored; diarrhœa and dysentery, 109 whites and 48 colored; total deaths from all intestinal diseases during the past six months, whites 366, colored 234 (total, 600).

This is comparatively small mortality from cholera in a population of 200,000; and as the whites constitute about three-fourths, and the colored people only one-fourth, it is evident that cholera, as well as other intestinal diseases, has been much more fatal amongst the colored population. This difference appears to be due in large measure to the fact, that as a general rule, the colored people occupy the more unhealthy and crowded portions of the city, and are less careful in their habits and diet.

The sudden subsidence of the cholera, is not to be referred to the sanitary condition of the city, which could not, perhaps, be much worse at this season of the year; nor to the universal employment of any special means of disinfection. Numbers of cases have occurred in localities where no disinfection was practised, and it is probable that only the severe and fatal cases have been reported to the local sanitary officers. The peculiarly mild character of the recent epidemic, may be due to certain unknown conditions of the atmosphere and soil, and to the heavy rain-fall, almost twenty-two inches of water having fallen during the past six months.

Cholera first appeared in New Orleans, Oct. 25, 1832. The population of the city was, at that time, about 50,000. Dr. Campbell, one of the oldest physicians in New Orleans, informs me that in 1832, cholera spread with wonderful rapidity all over the city, and that the mortality was fearful, as many as 500 deaths having occurred in one day. Entire families were swept off; the living were scarcely able to bury the dead. The disease committed great ravages upon the surrounding plantations. The alarm amongst the negroes was so great, that in one instance the entire population of a large sugar plantation on the Mississippi river fled and encamped upon the borders of Lake Ponchartrain.

Whatever measures may be instituted in the treatment of cholera, absolute rest from the inception of the first symptoms, and throughout the disease, is absolutely essential.

Whatever doubts might be entertained in the minds of the physicians of New Orleans, as to the nature of the recent epidemic, it is now well established, that the disease has followed the main lines of commerce on the Mississippi river, prevailing at various towns and plantations, up to Memphis, from which latter place it is supposed to have been carried to Nashville, Tennessee.

I will endeavor to forward to your valuable JOURNAL such facts as I may be able to gather with reference to the recent epidemic of cholera in Tennessee.

Respectfully,
JOSEPH JONES, M.D.

493 St. Charles Street.

Medical Miscellany.

To Remove a Plaster Bandage.—Soak the bandage in a solution of salt. The plaster crumbles.—*Clinic.*

The British Medical Association has increased its number of members from two to five thousand during the last ten years. This is mainly due to the influence of the *British Medical Journal*, which has a circulation of several hundred outside the association.

Anti-neuralgic Snuff.—Dr. F. Scriffignano recommends in facial neuralgia, especially of the periodic form, the use of snuff containing fifty centigrammes of quinine to one gramme of tobacco. Pinches of this mixture are to be taken at frequent intervals during three consecutive days.

Exchanges with Periodicals.—In consequence of the new post office regulations, which now require the payment of postage on periodicals in exchange for other periodicals, the Journal will in future be discontinued to some of the Publishers who have heretofore received it in exchange. In cases where the exchange is continued, we shall, unless some other arrangement be made, pay the postage here on exchanges that come to us, and expect the same to be done on ours where received.

Excision of Superior Maxillary.—John P. Wall, M.D., of Tampa, Florida (*Atlanta Med. and Surg. Journal*), records a case of excision of the superior maxillary bone, the patient being a female child of eight years. The chief interest of the case consisted in the absence of any kind of pain, the rapidity of the growth without known cause, and the rarity of such a diseased condition of this bone in children.

The Cholera in Europe.—A report from Vienna, dated July 3d, states that a formal denial is given to the news of an outbreak of cholera in this city. A few cases have occurred among foreigners who have arrived from places where the epidemic prevails, or passed through the infected districts on their way hither. The disease has no epidemic character, and the general health of the city is satisfactory. In the Dresden district, from June 24th to July 7th, there had been 55 cases with 29 deaths. In Breslau, up to Monday night, 18 persons had been attacked, of whom 14 had died. A cholera committee has been appointed for the German empire, consisting of General Surgeon Dr. Böger and Dr. Hirsch of Berlin, Dr. Max von Pettenkofer of Munich, Dr. Günther of Zwickau, and Dr. Volz of Carlsruhe. Eight cases, with four deaths, are reported to have occurred at Lautenburg near Strasburg. Cholera has broken out in the Italian provinces of Treviso and Venice. In the former, up to July 8th, there has been 41 cases, with 25 deaths and 28 recoveries; in the latter, 55 cases, with 26 deaths and two recoveries.

The Prosecution of Obscene Quacks.—The Society for the Suppression of Vice, whose age numbers three-score and ten years, held its annual meeting this week in the Freemasons' Tavern, Great Queen Street; Lord Ebury in the chair. The report stated that as to pretended medical works, the Committee had hitherto refrained from interfering, as they conceived it rather the duty of the College of Surgeons or the Treasury to test the question whether the law would afford a remedy in such cases. As neither took up the point, the Society had tried the question whether such works were protected by law, and had obtained a favorable judgment, which would operate as a precedent ever after in similar cases. The Society, therefore, earnestly appealed for contributions to discharge this amount. A prosecution had also been undertaken against a so-called anatomical museum, the result of which had been an intimation that it would be closed.—*British Medical Journal.*

Replantation of Teeth.—An article in the January number of the Dental Cosmos, on "Replantation of Teeth," leads me to state that in my practice replantation of teeth has nearly ceased to be an experiment. Within the last three years I have successfully performed the operation on five teeth (two for one patient). In each case the tooth was badly decayed, and the root ulcerated. After extracting and treating the tooth socket, I treated the root, and filled not only the cavity but the nerve canal in the root, and replaced the tooth, and without an exception each operation has been a perfect success.

The first patient whose tooth I treated in this way was a young man with whom I was very intimate; he had an ulcer, which gave him much trouble, on the superior incisor. It had been filled several times with different materials without satisfactory results, and he was obliged to have it extracted, and as an experiment I offered to undertake the operation of replacing it, after removing the ulcer and properly filling the tooth. The operation consumed about seventy minutes. There was much sensitiveness about the tooth at first, which soon subsided, and about a year afterward he had the other superior incisor treated in the same manner.

It is now over two years since the last operation, and, to use his own words, "They are the best teeth I have." Since then I have performed the operation on three different patients, and every case has proved a perfect success.—*Dental Cosmos.*

Tuberculosis and Humanized Lymph.—In a correspondence of the *Gazette Médicale*, 26th April, there are some propositions formulated by Drs. Paraskeva and Zallones, of Greece, concerning repeated experiments made by them of inoculation on rabbits, of vaccine virus taken from persons in the second stage of phthisis. From these they think it seems as if tuberculosis were transmissible by vaccine. Here are their words :—

1. The animals on whom the experiments were made, were in the most healthy condition.
2. Vaccine taken from a tubercular person may produce tuberculosis on one (animal) that enjoys perfect health.
3. The blood of a person with cavities in the lungs, carries with it the tubercular virus, and this poison is found in the liquid and solid part of the blood.
4. Fourteen days sufficed for the development of the tubercle in the animals affected.—*L'Independente*, May, 1873.

Mortality in Massachusetts.—*Deaths in fourteen Cities and Towns for the week ending July* 19, 1873.

Boston, 191—Charlestown, 16—Worcester, 19—Chelsea, 11—Cambridge, 21—Salem, 12—Lawrence, 14—Lynn, 9—Fitchburg, 4—Newburyport, 2—Somerville, 7—Fall River, 33—Haverhill, 5—Holyoke, 18. Total, 362.

Prevalent Diseases.—Cholera infantum, 81—consumption, 48—scarlet fever, 18—dysentery and diarrhœa, 13.

Six deaths from smallpox occurred in Holyoke, and one in Boston. Of the deaths from cholera-infantum, forty-three occured in Boston, eleven in Worcester, ten in Fall River and eight in Lawrence. Of the deaths from scarlet fever, fourteen occurred in Boston.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, July 19, 181. Males, 84; females, 97. Accident, 4—apoplexy, 4—inflammation of the bowels, 5—bronchitis, 1—inflammation of the brain, 1—congestion of the brain, 2—disease of the brain, 9—cyanosis, 1—cancer, 2—cholera infantum, 47—cholera morbus, 4—consumption, 20—convulsions, 6—debility, 4—diarrhœa, 6—dropsy of the brain, 4—drowned, 1—dysentery, 9—erysipelas, 1—scarlet fever, 7—typhoid fever, 2—disease of the heart, 7—hæmorrhage, 1—disease of the kidneys, 5——congestion of the lungs, 3—inflammation of the lungs, 6—marasmus, 6—old age, 2—paralysis, 1—pleurisy, 1—premature birth, 2—peritonitis, 2—pyæmia, 1—rheumatism, 1—scalded, 1—sunstroke, 1—unknown, 1.

Under 5 years of age, 104—between 5 and 20 years, 10—between 20 and 40 years, 22—between 40 and 60 years, 24—over 60 years, 21. Born in the United States, 143—Ireland, 23—other places, 15.

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Original Communications.

NERVOUS DISORDERS OCCURRING DURING VARIOLA.

By James J. Putnam, M.D.

From reading the report of an interesting case of general paralysis consequent upon variola, reported by Dr. Goss in the Journal for May 8th, I was induced (as I hope other physicians will also be, whose field of observation during the past epidemic has been larger) to report briefly another case of nervous disease occurring under somewhat similar conditions, although of a different nature from his.

James English, blacksmith by trade, was attacked on the 10th of December, 1872, with the usual symptoms of variola, which soon became so severe that he lay for several days without consciousness. On the eighth day of the attack, consciousness having begun to return, he noticed that his right shoulder felt heavy and unwieldy. At the same time he began to suffer from severe pains, generally deep-seated and of a dull aching character, which extended from the spine to the top of the right shoulder and down on to the upper part of the arm. After three or four days, the pain began to abate and gradually disappeared. On first leaving his bed, in the fifth week of the disease, the patient found himself unable to raise the right arm above the shoulder, and, in short, with complete paralysis of the right serratus magnus, or, properly speaking, of the posterior thoracic nerve, and in this condition he came, four weeks later, under my observation in the Out-Patient Department of the Massachusetts General Hospital. At this time, the posterior thoracic nerve which supplies the serratus had lost its power of responding to faradization, and the rhomboid muscles of the same side and the lower part of the trapezius responded less readily than those of the opposite side. The fact that so few muscles were affected even at the outset, together with the fact that the electrical excitability of the nerve had disappeared, rendered it certain that the thoracicus posterior had been so injured somewhere in its course as to cause its peripheral extremity to undergo degeneration; and that, since the rhomboids were somewhat affected, it seemed probable that the seat of the lesion was at the level of the scalenus medius which the two affected nerves perforate in company, both of them being formed, one wholly, and the other in part, by fibres from the fifth dorsal nerve. No other nervous disturbance was to be found. The patient was treated for two months with large doses of strychnine, given by the mouth, and with galvanization of the affected nerves and muscles, but, except that he learned to use his arm more skilfully, he became no better.

Reports of nervous disorders after variola as also after the other exanthemata are occasionally met with in literature, though but little light has been thrown until recently upon their pathological anatomy.

Eulenburg* refers to a number of cases reported by Gubler, Freind, Leroy d'Etiolles, Contone, Reynand, Pidoux. The lower extremities were generally attacked alone; sometimes, however, the soft palate, the bladder, the rectum, also. The paraplegia was generally accompanied by anæsthesia, sometimes in the beginning by hyperæsthesia. There was opportunity for but two autopsies which gave negative results. Most of the cases ended in complete or partial recovery after two to six months. Eulenburg had himself observed a case of partial paralysis of the left facial and both median nerves in which the electrical reaction was but little changed, and the course of the disease was favorable.

Rosenthal† of Vienna, reports a case where variola was followed in six months by progressive muscular atrophy.

An epidemic occurring in Berlin during the winter of 1870–71, gave opportunity to Prof. Westphal of observing a number of cases of great interest.‡ Two of these *(both light as far as the variola was concerned)*, in which there was almost complete paraplegia appearing on the third and eighth day, respectively, ended fatally; one from perityphlitis, the other from cystitis with decubitus; and the autopsy showed in both diffused myelitis, spots of softening of the size of a pin's head being scattered irregularly throughout the spinal cord. Five of these cases as well as a similar one reported by Pforzheim,§ were characterized by:

1. Ataxia and tremor in all four extremities and the muscles of the face, present only during the performance of some act requiring voluntary coördination.

2. Slowness and awkwardness in movements.

3. Involuntary repetition of single movements, especially those of the fingers.

4. Slow, monotonous, explosive manner of speaking, with faulty articulation and without modulation of the voice.

5. Mental depression.

6. Temporary congestions in different parts of the body, especially the head.

In short much the same set of symptoms as characterize disseminated sclerosis of the brain and cord.

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* Functionelle Nervenkrankheiten. Berlin. 1871.

† Nervenkrankheiten. Erlangen. 1870.

‡ Berliner Klinischer Wochenschrift, Nov. 18, 1872.

§ Schmidt's Jahrbücher. No. 1. 1873.

Westphal suggested that in these cases there had been diffused myelitis, which had in fact finally resulted in sclerosis; and his idea was strengthened by the results of an autopsy made by Erbstein in a similar case occurring after an attack of typhoid.

Breganze* reports a case of aphonia coming on during variola in the height of the fever, but yielding finally like hysterical aphonia to a single application of electricity, leaving, however, a degree of stuttering behind. He considered the cause to be cerebral atony, due to exhaustion from the disease.

In this connection a case may be mentioned† where a patient became suddenly comatose after an attack of measles, and remained, after the coma had passed away, with loss of coördinating power in all four limbs, such as has been referred to above.

Two cases were observed by Dr. Hitzig during the epidemic in Berlin, which closely resemble the one which I reported at the outset. In one of them, there was severe neuralgia with partial motor paralysis in the parts supplied by the nerves of the brachial plexus on both sides; in the other, neuralgia of the arm and shoulder, with paralysis of the deltoid alone, on one side only. Where the paralysis is thus circumscribed, the opinion seems to be that hæmorrhage has occurred among the fibres of a nerve trunk, as has sometimes been found after typhoid, and the diffused myelitis may have a similar origin, although it is noticeable that the cases in which these paralyses occur, are not necessarily of a severe or a hæmorrhagic form. In both of Hitzig's cases, the paralysis came on very early in the disease, and was certainly not due to exhaustion.

A writer in the *Arch. de Physiologie Normale et Pathologique* (January, 1873) remarks, in referring to Westphal's cases and reporting an analogous one, that he had examined the spinal cord in a great many ordinary cases of variola, but had never noticed anything abnormal.

INTERNATIONAL MEDICAL CONGRESS.—The third annual session of the International Medical Congress will be held the present year at Vienna, during the Exposition. The Congress will convene, under the patronage of the Archduke Rainer, upon the 2d of September, and the session will last until the 10th. Meetings will take place each day (Sundays excepted), from 9, A.M., till 1, P.M. Upon the first and last day of the session, Prof. Rokitansky, being president of the executive committee, will preside. For the other days, the presiding officers will be chosen by ballot. The other members of the executive committee are Professors Sigmund, Hebra, Benedikt and Schutzler.

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* Allgem. Med. Central-Zeitung. Dec. 7, 1872.

† v. Centralblatt for Feb. 15, 1873.

Progress in Medicine.

ON DISEASES OF CHILDREN.

By D. H. Hayden, M.D.

On the Fermentative Action of the Secretion of the Pancreas and of the Parotid Gland of Infants and New-borns upon Starch. Korowin, of St. Petersburgh. *Centralbl. f. d. Med. Wissensch.*, No. 17, 1872.

On the Secretion of Saliva and its Fermentative Property in New-born Infants. Korowin. *Centralbl. f. d. Med. Wissensch.*, No. 20, 1873.

In the first article, the author gives the results of experiments recently made with infusions of the pancreas and of the parotid gland taken from infants who had died of various causes, principally of intestinal and of thoracic diseases. These experiments were conducted all in the same manner, and, when possible, a quantitative anylasis of the glucose was made. The following are the conclusions arrived at:—

Infusions of the pancreas of infants only a few months old have absolutely no glycogenic action upon starch, this becoming first demonstrable at two months of age, and then only in a very slight degree; but, at the end of the third month, it is so great that in some cases the amount of sugar could be determined quantitatively. The fermentative action increases with age, and, at the end of the first year, is at its height.

The infusions of the parotid gland, on the contrary, convert starch into sugar in the very first days of life, and the amount can be quantitatively determined. The larger the size of the child the more powerful is the action.

In the second article, the author gives the results of experiments with the saliva of infants and new-borns as to its action upon starch. To obtain the saliva, small lightly pressed pieces of soft sponge were used, the infants being allowed to suck them, and the saliva, thus accumulated, squeezed out; by a frequent repetition of this process, a sufficient quantity for all purposes was obtained. The collection of saliva in this way is possible a very few minutes after birth, but during the first month, especially during the first two weeks, great difficulty is experienced and very persevering efforts required. The largest amount obtained at this early age did not exceed a centimetre, requiring from fifteen to thirty minutes in the operation; sometimes only a few drops were obtained, but such unfavorable cases were very rare except in the first ten to fourteen days of infant life. After the first month, especially after the first month and a half, the secretion of saliva begins to increase very largely in amount, and its collection becomes very easy; in the fourth month, it is so large that in the course of five or ten minutes from one to one and a-half centimetres are collected with ease. At this age, sometimes later, the saliva begins to flow out of the corners of the mouth. With the saliva collected from seventeen new-borns from one to ten days old, the author was able to demonstrate in each case, the conversion of starch into sugar. The number of infants up to eleven months of age comprised twenty-five, several of whom were under the author's continued observation for from five to six months. In all cases, where possible, quantitative analyses of the sugar were made. The number of experiments up to the present time is so small that the author regards his conclusions as more theoretic than demonstrated, but as a result of his investigations, it is shown that the saliva of an infant, immediately after birth, possesses the power of converting starch into sugar, this property increasing as the child grows older. The quantitative analysis shows a very great difference of degree in this fermentative property of saliva in the different months of infant life; at eleven months it reaches its height, and some at this age, compared with an equal quantity of his own, was found to contain the same amount of sugar.

Constipation in Children. A. Monti. *Schmidt's Jahrbuch.* No. 10. Dec. 1872. *Wiener Med. Presse,* xiii., 26-28, 1872.

The causes of constipation, a complaint so frequent in infancy, the author finds in the want of development of the muscular coat of the intestines, in the peculiarity of infants' food and of their mode of life, and also in the length of the colon descendens, especially of the flexura sigmoidea. The fæces lose their pulpy consistence, and defecation, which should normally take place without any great effort, becomes difficult and is accompanied by colicky pains; the latter come on sometimes only at the time of dejection, at other times periodically and independent of it; in the latter case, there is always meteorismus, which in its turn leads to the symptoms of dyspepsia. Attacks of colic may give rise to convulsions, especially in children affected with chronic hydrocephalus, microcephalus, craniotabes, rhachitis or anæmia. As a result of straining, atomy and paralysis of the bowels follow. Constipation, both accidental and habitual, is often accompanied by dysuria. The author places the causes of constipation under the following heads:—

I. Mechanical obstructions; *(a)* congenital malformations of the intestine; *imperforatio* or *stenosis recti congenita, partialis et totalis;* retention of the meconium with secondary symptoms of ileus; *(b)* acquired; strangulation of a hernia, invagination of a portion of the intestine, fissura ani, atresia ani and partial stricture of the rectum (cicatrices dysenteriæ).

II. Want of nourishment in cases of congenital malformation of the lips or of the pharynx, when the mother's nipples are bad, or the secretion of milk too little, or the infant of too weak vitality to draw out the milk. In these cases the infant, in addition to constipation, secretes but a small amount of urine.

III. Improper nourishment; too much casein or too little fatty constituents in the milk; placing the infant too often to the breast; when brought up artificially, improper constitution of the food or insufficient quantity, either the result of the composition of the milk or too early use of starchy substances.

IV. Absence or diminution of the peristaltic movements of the intestines; atrophy of the bowels, with meteorismus in rhachitis, or after diarrhœa of long duration.

V. Diminution of the intestinal secretion, after long continued sickness, the result of anæmia.

VI. Symptoms of cerebral or of spinal disease.

VII. Result of want of supply of fluids, use of astringents, presence of ascarides, kernels of fruit, &c.; and, finally,

VIII. In large children, want of exercise.

The treatment depends upon the cause. The important point is to prevent a return of the constipation after the bowels have been freed of the accumulated fæces. To effect the latter, the author recommends infus. sennæ (7.5 grammes ad aquæ fervid. 50 grammes, a tablespoonful every hour until operation), or still surer, hydromel infantum and rhubarb, syrupus spinæ cervinæ, or syrupus rhamris catharticæ. Enemata are necessary only when quick action is desired. Suppositories in cases of habitual constipation are never necessary. The causal treatment is determined upon in accordance with the above scheme. When there is a want of peristaltic action of the intestines, the author recommends cod liver oil and an enema of cold water at the same hour every day. With older children, after long continued disease of the bowels, there is an indication for marienbad, franzensbad or friederichshaller water; in anæmia, glerchenberger, or klausner spring water, for children under two years, thirty, for older ones sixty to one hundred grammes daily on an empty stomach.

Treatment of Croup. Leopacher. *Baier. ärtzl. Intell.-Bl.* 1872. No. 40; *Centralbl. f. d. Med. Wissensch.* Nov. 23d, 1872. No. 50.
Critical Remarks upon the various Methods of treating Diphtheria. Ludwig Letzerich. *Berlin. Klin. Wochenschr.* No. 26, 1873.

Leopacher reports two cases of laryngeal croup (diphtheria) which ran a favorable course under the use of bromine-inhalations as recommended by Schütz (Cbl. 1872, 429). With the exception of exciting a severe coughing spell there were no bad after results. The croup membrane expelled in one of the cases was tested as to its solubility in lime-water, chlorine-water, Schütz's solution of bromine, simple bromine-water, solution of chloride of lime (not very concentrated) and bromine vapor. Lime-water worked the most rapidly, next chlorine-water, and then Schütz's solution. That the former is so void of results in practice, the author explains by the lime becoming immediately saturated with carbonic acid. The bromine seems to act upon the connective tissue between the mucous membrane and exudation, and not as a solvent of the latter.

Letzerich in his "critical remarks upon the various methods of treatment of diphtheria," says that, of the various remedies that have of late been recommended for this disease, none of them have accomplished much in the way of results. Of late years, remedies have been particularly brought into prominence, that exercise a greater or less solvent power upon the diphtheritic exudation, the most various substances having been tested in this way. Substances also have been employed, which have the property of destroying parasites, at the head of these standing carbolic acid. With all these remedies, it was sought to produce a chemical change in the diphtheritic membrane, and also, if possible, to destroy any parasites existing therein or penetrating into the mucous membrane and circulation. The so-to-speak solvent remedies are employed in such dilute solutions, and exercise such a momentary action, that, according to the author, they can never be regarded as the principal agents in the treatment of diphtheria, though they are in some cases recommendable as valuable auxiliaries. In cases not severe, where the exudation is of creamy consistence, applications, with a brush, of lime water, solution of bromide of potassium and bromine, carbolic acid, or the insufflation of flor. sulph. are useful; in many other cases this method of treatment is of no avail.

According to the author, the important object in the treatment is the mechanical removal of the exudation, by means of small sponges; and when this does not succeed, he employs the index finger of the right or left hand, covered with a piece of linen cloth and soaked in a strong solution of alum, afterwards painting over the surface of the ulcer with a solution of argenti nitras, 1.0—1.5 grammes ad aquæ destillat. 15—20 grammes. In the intervals, the author recommends lime water, solutions of bromine and bromide of potassium, or carbolic acid to be applied with a brush or used as a gargle. With this method, he has had the most brilliant results, having thus treated two hundred and thirty-four cases, of which only fourteen (5.97 p. ct.) died. The most scrupulous cleanliness and disinfection of the patient's clothing, bedding and chamber are to be insisted upon.

On the Treatment of Whooping Cough with Inhalations of Gazeol. Dr. ALOIS MONTI, Instructor in the University of Vienna.—*Jahrb. f. Kinderheilkunde.*

Fluid Extract of Castanea Vesca in Whooping Cough. THOMAS D. DAVIS, M D., Dayton, Ohio.—*Philadelphia Med. Times*, 111, 61. *Schmidt's Jahrb.*, No. 2, 1873. *Allg. Med. Central Zeitung*, No. 46, 1873.

The Treatment of Whooping Cough with Quinine. B. F. DAWSON, M.D. *American Journal of Obstetrics and Diseases of Women and Children*, February, 1873.

There exists a great difference of opinion amongst medical men as to the value of inhalations of gases developed in the purifying chambers of gas-works, in the treatment of whooping cough, as recommended by Diday and Commenge. Burin de Buisson attributes this difference of opinion to the want of similarity in the gases thus employed, he having found by examination that not only do these gases differ in different gas-works but that also they are not the same at all times of the day in the same works. For this reason and owing to the fact that some of the gases are injurious, he was led to compound a mixture of volatile fluids which he called gazeol. The original recipe reads:

Aq. ammon. impur., one kilo-gramme.
Acetone, ten grammes.
Naphthaline (brown impure), one tenth of a gramme.
Benzole, ten grammes.
Tar, one hundred grammes.

Monti made experiments with this preparation in fourteen cases. Two to four tablespoonsful of the fluid placed in a small cup were slowly evaporated over a water bath. The inhalations were made in a small room where the children remained for one hour, three times a day, at 9 A.M., 2 P.M. and 5 P.M.

The result of this treatment is represented in a tabular form, and the author draws the following conclusions:

1. The inhalation of gazeol is in no ways a specific against whooping cough.
2. Employed at the commencement it is powerless to stop the disease. In eight of the cases the disease ran its course in spite of the inhalations.

3. The gazeol-inhalations are unable to mitigate the severity of the disease. In the eight fresh cases reported, the disease increased steadily in intensity for the first two or three weeks.

4. They in no way shorten the duration of the disease, in all the reported cases the pertussis lasting from six to eight weeks.

5. In old cases the treatment is equally fruitless.

6. In those cases complicated with severe bronchitis, pneumonia developed itself with fatal result. Without drawing any conclusions from this coëxistence of the two diseases which may have been accidental, this circumstance seems to call for great caution, and in such cases (as is well known with regard to remaining in gas-works) the employment of gazeol-inhalations should be stopped.

In an epidemic of whooping cough in the Children's Asylum, Philadelphia, Dr. Thomas D. Davis, at the suggestion of Dr. T. S. Parry, made a trial of the fluid extract of castanea vesca with a large number of children varying from four to seven years of age. The author gives in tabular form the results in fifteen cases thus treated, the severest placed at the top. The number of paroxysms during each day of treatment is noted in such a way that under A is seen the number when treated with belladonna, under B when the expectant treatment was adopted, and under C when the fluid extract of castanea was used :

No. of the Case.	*A*	*B*		*C*				
1	16	20	27	19	11	9	5	2
2	14	24	24	20	9	4	4	2
3	13	13	17	12	5	4	1	1
4	12	16	20	10	6	3	2	0
5	12	18	18	7	4	5	2	1
6	12	15	20	9	5	3	1	2
7	11	11	18	6	4	2	1	0
8	10	9	12	7	2	0	1	0
9	9	12	13	5	4	2	1	0
10	7	9	10	2	2	2	0	0
11	7	8	15	4	3	1	0	0
12	5	6	10	3	1	1	0	0
13	5	7	6	2	0	0	0	0
14	3	4	4	3	1	0	0	0
15	2	4	5	4	2	0	0	0

The extract is prepared from the leaves of the castanea vesca (cupulifer). The bark of the castanea pumila was at one time officinal in the United States.

The first to recommend this remedy in whooping cough, was George C. Close *(Amer. Pharm. Journal,* 1863*)*, an infusion sweetened with sugar being employed. Then followed in 1867, J. Unzicker *(Cincinnati Med. and Surgical Reporter,* 1867*)*. After him, J. Ludlow *(Cincinnati Lancet and Observer,* March, 1869*)*, and still later, Dr. A. S. Gerhard, in Philadelphia. John Maisch *(American Journal of Pharmacy,* Dec., 1871*)* prepared the extract from leaves collected from July to October. Of the latter, dried and powdered, four hundred and eighty grammes are taken, and with one hundred and fifty grammes of glycerine, two hundred and forty grammes of sugar, and a sufficient quantity of water, a decoction made which is then boiled down to four hundred and eighty grammes. Of this the dose for a child six years old, is from one quarter to one teaspoonful every three or four hours. The author declares the remedy to be an antispasmodic expectorant, of agreeable taste, and willingly taken by children. Although in the severe cases this treatment was not commenced until the disease had reached its height, the decrease in the number of paroxysms was so striking, and took place so immediately after the use of this remedy, that it cannot be denied that the castanea treatment was instrumental in producing the beneficial result. The author rightly says, however, that in a disease, the course and duration of which is so much influenced by outward circumstances, one can form a true judgment of the effect of a remedy only after very numerous observations upon patients placed under similar circumstances in every respect.

Dr. B. F. Dawson gives the results of his experience with large doses of quinine in the treatment of whooping cough. Sixteen cases were thus treated ; the records of six are given in full, the remaining ten presenting similar histories. The shortest cure was effected in one day and the longest in twelve days. In but two cases was he disappointed in the efficacy of quinine, and the failure in these he attributes to the negligence of those in charge of them, one being a little girl in the care of her father, and the other a farmed out infant of twelve months. In both these cases, however, there was some palliation of the paroxysms. Though frequently there was some difficulty in getting the children to take so disagreeable a remedy, it was exceptional for them to resist after the first two or three doses, and in only a very few did it cause vomiting. The direction to give the children a piece of an orange or a little sugar, five or six minutes after taking the quinine, doubtless had considerable to do with their seeming willingness to take the "bitter medicine." Dr. Dawson, accepting the fungus theory of Dr. Letzerich as the true explanation of the cause of pertussis, attributes the efficacy of quinine to its well known destructive influence on fungoid development and consequently to its power of removing the cause of local irritation which gives rise to the reflex phenomena evinced in the whooping.

The author, however, regards as another factor in producing the rapid cure the nauseating bitter taste. In every case of pertussis there is an abnormal secretion of a thick tenacious mucus from the mucous membrane of the pharynx (whether due to simple, catarrhal or reflex hyperæmia or to fungoid development, matters not) which may or may not excite a paroxysm of whooping, but which certainly aggravates and prolongs the latter, as may be proved by the fact that the paroxysms invariably cease the moment this mucus is removed, either by coughing, by vomiting or by the finger. The effect of a small amount of a solution of quinine, when taken into the mouth and swallowed, is instantly, from its bitter and nauseating taste, to excite a free secretion of thin mucus from the buccal mucous membrane and the salivary glands, and this softens and renders easy of dislodgment the tenacious mucus referred to. The frequent repetition of the quinine keeps up this free secretion, and thus prevents the mucus from becoming tenacious and difficult of dislodgement. At each act of coughing, therefore, the accumulated mucus is readily loosened and expectorated, and unobstructed inspiration is obtained. The rapid loosening of the cough, the briefness of the attacks in comparison with those previous to the administration of the quinine, and the easy expectoration certainly tend to favor the correctness of the above theory.

The author was induced to test the value of this new remedy for whooping cough, after having read a paper on "The use of Quinine in the Diseases of Children," by Professor Binz, of the University of Bonn, Germany, contributed by him to the above journal (Vol. iii., No. 1, May, 1870). The following rules are given as essential for success in this treatment of pertussis:

1. Give the quinine (sulphate or hydrochlorate), dissolved by acid in pure water only. For children under three years, from five to eight grains, and for older children and adults, from ten to twelve grains to the ounce.
2. Give not less than one teaspoonful every single, or at the longest, every two hours during the day, and whenever cough comes on in the night.
3. Give nothing afterwards for some minutes to destroy the taste or to wash out the mouth.
4. Continue giving it notwithstanding the first doses may be vomited.
5. Be sure that the quinine is pure and thoroughly dissolved.

On Vomiting of Habit. Henry M. Tuckwell, M.D., F. R. C. P. Physician to the Radcliffe Infirmary, Oxford.—*Medical Times and Gazette.*

The class of cases to which attention is here drawn would ordinarily be grouped under the head of hysterical vomiting, but this term is discarded by the author as inappropriate, because, in the first place, this particular kind of vomiting is met with in boys; secondly, it occurs in girls before the age of menstruation; thirdly, it yields to the same kind of treatment in both cases alike. Although in certain instances it may at the outset originate in some really morbid condition of the stomach or liver, yet it is afterwards perpetuated simply by force of habit, long after the exciting cause has gone and left no traces; while at other times it seems to begin without any assignable cause and to be continued as a habit for months or even years. The subjects of this bad habit are as a rule young; of either sex; of what is called a nervous temperament; quick and clever, but irresolute; often descended from parents in whom some neurosis or some imperfection in mental capacity has already manifested itself. Their condition is on the border-land of that of the adult malingerer, differing, however, in this respect, that they are sometimes reduced by the habit to a serious state of weakness and ill health, and that the vomiting from long continuance becomes rather an automatic than a voluntary act.

Their mental status has been well described by Dr. West in his interesting chapter on "mental peculiarities in childhood," in which will be found some instructive illustrations of this quasi-malingering in children. They go through their performances in various ways. One child will find it necessary, directly after food has been taken, to run to the water-closet, when the surroundings seem at once to give the stomach the necessary hint. To another, the mere sight of a basin after meals is sufficient to excite the act. A third, too weak to get out of bed, will raise himself into a particular posture and begin to vomit whatever food has been taken. The stomach has no time given it for discharging its proper functions, but the food is brought up as soon as it is swallowed. There is also no indication of pain or even of the discomfort which ordinarily precedes the sickness of a diseased stomach, while the regularity with which the act takes place after food, together with the absence of all cerebral symptoms, enables one to distinguish this kind of vomiting from the irregular vomiting of cerebral disease. In the treatment of these cases all medicines fail; even the carefully restricted diet which would be advantageous in chronic vomiting from diseased stomach proves quite unavailing. Small spoonsful of milk and lime water, which would be retained by a person with ulcer or cancer of the stomach, are no sooner taken than they are rejected.

The first thing to be done is to separate the child from its parents, and to give a fresh coloring to its daily impressions by means of new faces and new influences. Next, the child must be watched, and notice strictly taken of the way in which it sets about vomiting, so that one may be enabled, with the help of a kind and firm nurse, to suddenly interrupt the usual performance and so break in upon the habit. The author reports several cases, when a genuine cure was effected in this way, after weeks or months of medical treatment had failed, and where even the discipline of a hospital and the most rigorous diet had been unable to break the spell.

Convulsions in a new-born child, caused by milk of a wet-nurse abusing alcoholic drinks. C. E. Brown-Sequard, M.D. New York. *Archives of Scientific and Practical Medicine.*

This is the history of an important case. A child was born at the eighth month of gestation. It was fed with a bottle first, then by a wet-nurse. During the first month, it gained but little in size; under the suckling with the nurse, it increased considerably in size and weight; at this time it was noticed that the child had become hyperæsthetic, and then had convulsions, very severe and very frequent. No cause could be assigned to this affection, which baffled treatment, until, on further inquiry, it was found that the wet-nurse was in the habit of indulging in drinks of a wine very rich in alcohol. From the time the wine was cut off, the child, after a week, was completely cured, as the convulsions kept decreasing both in number and severity every day up to the seventh, when it was allowed to suckle again, as it was supposed that after this lapse of time, alcohol must have been thoroughly eliminated from the organism of the wet-nurse.—*Lyon Médical*, 24th Nov., 1872.

Communication of Aphthæ Epizooticæ to Human Beings.—This malady has prevailed extensively among the animals in the canton of *Fribourg*, and in two instances have come under the observation of Dr. Clerc in which it was communicated to human beings. In one of these cases, a young girl presented symptoms of coryza and aphthous stomatitis, while the terminal phalanges of both hands and feet were swollen. A suppurative process was, moreover, established around the nails, causing considerable suffering for a number of weeks.—*Revue Scientifique.*

Reports of Medical Societies.

THE AMERICAN OTOLOGICAL SOCIETY. J. ORNE GREEN, M.D., SEC'Y.

The sixth annual meeting of the Society was held at Rice's Rooms, Newport, R. I., on July 16th, 1873, at 10 1-2 o'clock, A.M., the President, Dr. Henry D. Noyes, in the chair. Seventeen members present.

The President appointed Drs. Pomeroy, Strawbridge and Sexton as the Executive Committee.

Notice was given of a proposed amendment to the By-laws, by striking out the paragraphs referring to the corresponding secretary, thereby doing away with the office; and also, to change the rule for the meeting, so that it should read " meeting annually at such time and place as may be determined upon each year."

The Treasurer's report was read, audited and accepted.

The Executive Committee nominated as members of the Society, Drs. C. J. Kipp of Newark, N. J., William Thomson of Philadelphia, David Webster of New York; all of whom were elected, and Drs. Kipp and Thomson took their seats as members.

The following bulletin of papers was submitted by the Executive Committee, read in order and referred to the Publishing Committee:—

Report on the Progress of Otology,	Dr. Burnett.
Report of three cases,	Dr. Buck.
Tenotomy, Musc. Tensor Tympani,	Dr. J. Orne Green.
Therapeutic Value of Tenotomy of the Musc. Tensor Tympani,	Dr. Bertholet.
Cases illustrating the effects of Paracentesis of the Membrana Tympani,	Dr. O. D. Pomeroy.
Tympanic Trephine,	Dr. Burnett.
Ulceration of the Dermoid Layer of the Membrana Tympani,	Dr. J. Orne Green.
A case of hardness of hearing for low tones,	Dr. Burnett.
A peculiar manifestation of the paradoxical formula in the application of the constant electric current to the right ear,	Dr. Burnett.
Reaction of the auditory nerve under the galvanic current,	Dr. Blake.
Diagnostic value of high musical tones,	Dr. Blake.
Case of deformity of the auricle, the result of inflammation,	Dr. Roosa.
Deafness, in consequence of epidemic cerebro-spinal meningitis,	Dr. Knapp.

The thanks of the Society were voted to Dr. Burnett for his elaborate and faithful Report on Otology.

At 2 1-2 o'clock, after the reading of the fourth paper, the Society adjourned to 4 o'clock.

SECOND SESSION.

The Society was called to order at 4 o'clock by the President, and the minutes of the first session read and approved. The reading of the papers was then continued till 5 1-4 o'clock, when, after hearing the ninth paper, the Society adjourned.

THIRD SESSION.

The third session was opened by the President at 7 3-4 o'clock, and the two amendments to the By-Laws proposed at the first session were adopted.

It was voted that one hundred extra copies of the Report on Otology be furnished by the Society to the author of that paper.

The reading and discussion of the papers was then concluded.

The Executive Committee reported the following list of officers for the ensuing year, all of whom were elected :

President—D. B. St. John Roosa, M.D.

Vice-President—Clarence J. Blake, M.D.

Secretary—J. Orne Green, M.D.

Publishing Committee—J. Orne Green, M.D., Charles E. Hackley, M.D., R. F. Weir, M.D.

Committee on Progress of Otology—Charles H. Burnett, M.D., Clarence J. Blake, M.D.

The same rules in regard to papers, proofs and adjournment as last year, were adopted, Oct. 1st being the last day for the reception of articles for publication.

A communication was received from Drs. Blake, Roosa and Pomeroy in regard to an International Otological Congress, and on motion of Dr. Roosa it was resolved, 'that a committee of three be appointed by the chair, who shall report at the next meeting of this Society, as to the feasibility of holding an International Otological Congress in New York in 1876.'

The President appointed as such committee Drs. Roosa, Blake and Knapp.

The minutes of the second and third sessions were read and approved, and the Society adjourned at 9 3-4 o'clock.

Bibliographical Notices.

Annual Report of the Superintendent and Physician of the New York State Inebriate Asylum, Binghampton, N.Y., for the year 1872.

This report is largely taken up with the consideration of inebriety as it appears in those who have lost all self-control in the use of alcoholic beverages. It is assumed, 1st., that "Intemperance is a disease." 2d, that "Its primary cause is a constitutional susceptibility to the alcoholic impression." 3d, that "This constitutional tendency may be inherited or acquired." 4th, that "It is curable in the same sense that other diseases are." In other words that, as a disease, inebriety has its cause, diagnosis, prognosis and treatment as clearly marked and as well defined as are those pertaining to other diseases.

To support these propositions, the report cites at considerable length the opinions of Drs. Christison, Rush, Woodward, Parker, Flint, Anstie, Druitt and other recognized authorities of this country and Great Britain, and claims that "the fact that the inebriate is suffering from an actual disease which deprives him of the power of self-control should forever do away with the supposed disgrace and mortification attendant upon such a condition ; and there should be no more social disgrace in seeking a cure for this malady, than there is in being taken to an hospital for the treatment of a fractured limb."

As to the time required, the report advocates that patients should, as a rule, remain at least six months under treatment.

Several have become inmates of the institution who were addicted to the excessive and habitual use of opium. In the treatment of such cases, the "weaning process" is advocated, "letting the patient down by degrees with comparatively little suffering."

The number of patients admitted during the year was 249; discharged 253; remaining at the close of the year 81.

Annual Report of the Surgeon-General of the State of Massachusetts. 8vo. Pp. 18. Boston. 1873.

We learn from this report the nature of the onerous and valuable duties rendered the State during the past year by its able Surgeon-General, Dr. William J. Dale. The most important of these duties relate to the settlement of the claims and pensions of veteran soldiers, or to the families of soldiers, who have suffered by the circumstances of our late civil war. To the majority of this class, direct pecuniary aid is bestowed by the Government; others are assisted in obtaining employment, and thus enabled to earn an independent livelihood; while a third class, whose disabilities prevent them from working, are forwarded to some one of our national homes.

The late attack upon the department of which Dr. Dale is the head, by the Homœopaths, lends additional interest to this report, and the manner in which he acquitted himself under these circumstances, was, indeed, eminently calculated to sustain the dignity of the profession.

The record of General Dale is a long and honorable one, while his services to the State have been, and still are, invaluable. That these services cannot yet be dispensed with, without inflicting more or less suffering upon those who deserve well of the country, will, we think, be the honest conviction of all who will take the trouble to give this report even a hasty perusal.

Pharmaceutical Lexicon: A Dictionary of Pharmaceutical Science, containing a concise Explanation of the various subjects and terms of Pharmacy; with appropriate Selections from the Collateral Sciences, &c. &c. Designed as a Guide for the Pharmaceutist, Druggist, Physician, &c. By H. V. Sweringen, Member of the American Pharmaceutical Association, &c. Philadelphia: Lindsay & Blakiston. 1873.

The author of this work thinks that "perhaps none will dispute that it will prove of great service" to various classes of people, among them physicians, and be "an aid to the study of the U.S. Dispensatory."

A brief comparison, however, with the latter work will show that the dictionary is but little more convenient than the Dispensatory with its Index, and the amount of information is of course vastly less and is often erroneous. The range of the first part or dictionary, properly speaking, is more extensive only in a few and unimportant particulars.

Sintoc, Siritch and Zopissa are in the dictionary and not in the Dispensatory, but the valuable information given in regard to these substances is hardly sufficient to balance the really ingenious deficiencies in more important matters, botanical, chemical, and especially pharmaceutical.

Under cinchona, for instance, a large number of species are mentioned without a hint of their relative value or geographical distribution; and among them are included C. flava, C. rubra, and C. pallida, which are not botanical species at all, but pharmaceutical designations of different varieties of bark. Although apparently endeavoring in a confused way to recognize the fact that many allied species have been separated from the true genus Cinchona, he does not state that they are therapeutically and pharmaceutically as well as botanically distinct, since they contain none of the alkaloids.

"Sus scrofa," which is the scientific designation of the common hog (the "whole hog," in fact,) is by our author restricted to his pancreatic juice made into an emulsion with beef-fat.

Schuylkill water is said to be a "good water," &c., but the name of the city to which it is supplied is not stated. Croton is "a New York water," but for all the dictionary says it might be a medicinal spring in the Adirondacks. Cochituate is not honored with a mention.

The value of the book to physicians may be judged of by the statements that a catheter is "also a bougie made of silver or elastic gum," and that "adiaphorous" means "a medicine that does neither harm nor good. It is a question whether there are such medicines." There are those who consider such medicines among the most useful in the materia medica. A strictly confidential conversation with certain late members of Massachusetts Medical Society might relieve the author's mind of doubt on this point.

The various tables, collections of prescriptions, &c., at the end of the book, are of more or less value according to the sources from which they are bodily taken. The lists from the Pharmacopœia of 1873 are placed there apparently to avoid the trouble of revising the text in accordance therewith. The arrangement of poisons is worthy of note. Hemlock, foxglove and ergot are put under a common head with belladonna, and woorara with strychnia.

Lactucarium is mentioned among narcotic poisons. Stillé states that there is no record of poisoning by this drug or any approach thereto.

With much care devoted to pharmacy, botany and chemistry, and the omission of medical information, which must be very meagre, and probably will be erroneous, another edition of this work may become more nearly like what the author intended the present one to be.

On Strictures of the Urethra. Results of Operation with the dilating Urethrotome, with Cases. By F. N. Otis, M.D. Pp. 20. (Re-printed from the *New York Medical Journal.)*

Dr. Otis's paper strikes us as well worthy of re-publication. Though short, it is very suggestive of the progress which urethral surgery has made in the last ten years. The whole subject of stricture is an obscure one, concerning which there is still something to be learned; but the progress made of late is very cheering. For the account of the cases and the description of Dr. Otis's instrument, we refer the reader to the original paper, and notice only the conclusions which he has drawn. He believes "that a very considerable number of cases of chronic urethral discharges are dependent upon the presence and influence of comparatively slight contractions of the urethral calibre," and shows that these contractions may permit the passage of a full-sized sound, even while causing considerable trouble. The author also believes that cicatricial tissue may be absorbed after being completely divided, which, if it be found to be the ordinary result, is certainly of great importance. The value of the bulb-pointed sound in the diagnosis of stricture is strongly and properly insisted on, as its withdrawal, particularly after a short pause, is often arrested by slight bands which are not recognized as the instrument enters, and which, consequently, an ordinary sound would never show. We are quite of the author's opinion that multiple strictures in the same urethra will be considered less rare when this instrument is more generally used.

BOOKS AND PAMPHLETS RECEIVED.

Critique Addresses by Thomas Henry Huxley, LL.D., F.R.S. New York: D. Appleton & Co. 1873. Pp. 317. (For sale by A. Williams & Co.)

Insanity in its Relations to Crime. A Text and a Commentary. By W. A. Hammond, M.D. D. Appleton & Co. 1873. Pp. 77. (For sale by A. Williams & Co.)

Foods. By Edward Smith, M.D., LL.B., F.R.S. New York: D. Appleton & Co. (For sale by A. Williams & Co.)

Nature. A Weekly Illustrated Journal of Science. Mac Millan & Co.

American Chemist for June. Henry C. Lea. Philadelphia.

Prize Essay of the Alumni Association of the College of Physicians and Surgeons. New York: 1873. The Effects of High Atmospheric Pressure, including the Caisson Disease. By Andrew H. Smith, M.D., Surgeon to the New York Bridge Co. Brooklyn Eagle Press. 1873. Pp. 53.

Experimental Researches on the Causes and Nature of Catarrhus Æstivus (Hay-Fever or Hay-Asthma), by Charles H. Blackley, M.R.C.S. London: Bailliére, Tindall and Cox. 1873. Pp. 102.

The Cerebral Convolutions of Man. By Alexander Ecker. Translated by Robert T. Edes, M.D. New York: D. Appleton & Co. 1873. Pp. 87. (From Estes & Lauriat, Boston.)

The Etiology and Indications for Treatment of Irregular Uterine Action during Labor. By W. T. Lusk, M.D. (Reprinted from the New York Medical Journal.) 1873. Pp. 19.

Thirtieth Annual Report of the Managers of the State Lunatic Asylum, Utica, N. Y., for the year 1872. Albany: Argus Company, Printers. 1873.

PROFESSOR SCHUPPEL, of Tübingen, has been making experiments to ascertain the appearances caused by hanging, followed by burning. The results are different when the cord is left round the neck of the victim from those when it is removed. If, in the latter case, the body be burned till the surface is charred, the marks will have disappeared, but if the cord be left tightly drawn the depression will be perfectly clear. This is of great importance, as arson is often committed to hide murder.

Boston Medical and Surgical Journal.

Boston: Thursday, August 7, 1873.

The Wagner trial has, according to the detailed report in the *Maine Democrat*, furnished additional evidence of the need of a thorough reform in the methods of obtaining expert testimony in our criminal trials. Here, as in the Alley trial, self-qualified experts were summoned by the opposing counsel and made to contradict each other on the witness stand; and the daily papers have, as usual, indulged in sage remarks on the uncertainty of scientific testimony. The facts in the case were briefly these:—Certain stains had been found on the clothing of the accused, which the government undertook to show were blood-stains, and, moreover, not produced by fish-blood. For this purpose, an expert witness was introduced who entered into a lengthy description of the histology and chemistry of the blood, in the course of which he denied to the white blood globules all importance in the animal economy, except in so far as they might be changed into red globules, and described the red globules as closed sacs containing fluid. In justice to this gentleman, however, it must be said that, in those parts of his testimony which had a direct bearing on the case at issue, his statements seem to have been clear, straightforward, and (making due allowance for errors of reporters), in the main, correct. His testimony was to the effect that, after the blood-stains had been soaked in a fluid of a suitable specific gravity, circular globules made their appearance, which, by micrometrical measurement and by direct comparison, were found to closely resemble the human blood-disc.

The defence, having failed, in the cross-examination, to weaken the force of this testimony, introduced a chemist, who gave it as his opinion that the government witness had "testified to an impossibility," though the imperfection of the report leaves it a little doubtful to what this phrase refers. He then went on to deny the possibility of distinguishing human blood-stains from those produced by the blood of other mammalia, and asserted that even the oval and nucleated blood-globule of fishes might be mistaken for the human blood-disc, acknowledging, however, that "in fish blood there would always be many corpuscles which could not be mistaken." These statements seem to have been made, not as the result of careful observations and measurements by the witness himself, which alone could have given value to his testimony, but from the examination of photographs of blood-corpuscles and the writings of various authors, whose names, though excluded by the court, are, nevertheless, given in the newspaper report of the trial, and who are by no means so unanimous in their opinion on this subject as the witness would have us believe.

Thus, we have another instance of the impossibility of getting at the truth by our present methods of obtaining expert testimony in judicial investigations. The case occurred, it is true, in another Commonwealth, but the same system prevails in Massachusetts, and has led, and will continue to lead, to similar disgraceful results.

That the responsibility for this shameful condition of things does not rest with medical or scientific men, but with the government and the courts, has been already pointed out in the pages of this Journal. The unsuccessful efforts of the medical profession to procure a reform have also been there recorded. Not discouraged by previous failures, a joint committee of two medical societies and of the American Academy of Arts and Sciences, has, within a few months, made another effort to procure legislation, providing better methods of obtaining expert testimony. A bill, drawn for this purpose by the Hon. Emory Washburn, was presented to the judiciary committee, which had been specially ordered by the House of Representatives to consider the expediency of such legislation. The result was simply a report of "inexpedient."

A reform in this matter can only be brought about by the united efforts of the medical and legal professions; and, until lawyers feel, as keenly as medical men feel, all the disgrace which is brought upon the Commonwealth by such scenes as occurred in the Alley and Wagner trials, the efforts of physicians to effect a change in the law which regulates such matters can scarcely be crowned with success.

It certainly seems inexcusable that such a nuisance as that at Miller's River should not only continue during a greater part of the summer, but should ever have been allowed to exist at all. It appeared early in the season, in spite of the report of the joint committee of the Harbor Commissioners and State Board of Health, made to the cities of Cambridge and Somerville last December, containing a complete investigation of the nuisance, what caused it and how it could be cured; and it has continued, increasing rather than decreasing, in spite of the strongest remonstrances of the press and public generally. In the mean time, the cholera continues on its course, and is slowly and steadily making its way towards this part of the country. It is very much to be regretted that the excellent work of our city Board of Health should be well nigh set at nought by such a pestilence breeder as this. If the local authorities are either unable or unwilling to carry out suggestions coming from such unquestionably high authority, why does not the State government interfere and put the work at once into proper hands?

Apropos of the cholera, we cannot too strongly condemn the practice of sending sensational reports to the papers, as has been done both in this city and in New York during the past week. There was but one of these cases about which there could be any question whatever, the others being evidently not Asiatic cholera. Apart from the false light in which a physician places himself by such an error as this, we hardly need mention the unnecessary fear caused among a people already afflicted with two epidemics during the past year.

The Relation of the Pulse to the Condition of the Stomach.—*(Medical Times and Gazette,* May 10, 1873.) Important observations have recently been made by Mayer and Pribram on the reflex relations of the stomach to the centres of innervation for the circulation. The previous experiments of Goltz showed, what has ever since been accepted, that irritation of the wall of the stomach reduces the frequency of the pulse. The present experiments have determined that this slowing is accompanied by a rise in the arterial blood-pressure; and that the same result is obtained whether the irritation applied to the gastric wall is electrical or mechanical—for example, pinching the stomach with a forceps; the rise in the blood-pressure is plainly reflex in its causation, from contraction of the smaller or peripheral arteries. Similar results were obtained by inserting a bladder in the stomach and inflating it. On the other hand, the application of cold to the stomach, either by means of iced water or ice itself, yielded no positive result, provided mechanical irritation was carefully avoided. Further experiments seemed to refer the effect on the circulation to irritation of the serous and muscular coats of the stomach, while irritation of the mucous membrane only did not evidently affect the pulse. These results may help to explain the sudden death which is frequently seen in severe injuries to the stomach. The experimenters point out that the opinion of Guy is also in agreement with the results at which they have arrived—that the frequency of the pulse falls under vegetable diet.

Correspondence.

New Orleans, La., July 17th, 1873.

Messrs. Editors,—In accordance with my promise, I proceed to give you such facts as I have been able to gather with reference to the recent epidemic of cholera in Tennessee. The most important facts have been received from Nashville, and I am especially indebted to Col. W. D. Gale, for files of the daily papers.

We gather from the *Republican Banner*, of July 10th, that at a meeting of the Nashville Medical Society, held on the night of the 8th inst., the late epidemic was freely discussed. "It was the unanimous opinion of all present, that the disease was nothing more nor less than Asiatic cholera. It was most emphatically denied that it arose here from local causes. Its course had been clearly defined. It had passed from Rio Janeiro to New Orleans, from New Orleans to Memphis, and from Memphis to Nashville. It had been brought here from the two last named places. It was greatly aggravated by the use of stale, decaying and rotten vegetables, sent here from the south. All were of opinion that it had about spent its force in Tennessee."

According to the *Nashville Union and American*, there were a few cases of cholera in Nashville during the last week in May and the first week in June, of which there is no record.

The record of deaths, given by the *Union and American*, begins with the 7th of June, and shows the daily mortality from the pestilence to be as follows:—

	White.	*Colored.*	*Total.*
June 7,	11	10	21
" 8,	8	10	18
" 9,	7	11	18
" 10,	5	6	11
" 11,	6	9	15
" 12,	7	4	11
" 13,	5	10	15
" 14,	2	10	12
" 15,	10	15	25
" 16,	4	10	14
" 17,	20	24	44
" 18,	11	21	32
" 19,	8	22	30
" 20,	23	49	72
June 21,	20	39	59
" 22,	22	31	53
" 23,	11	26	37
" 24,	10	19	29
" 25,	12	13	25
" 26,	7	17	24
" 27,	10	10	20
" 28,	5	7	12
" 29,	8	16	24
" 30,	4	6	10
July 1,	8	8	18
Total,	244	403	647

In addition to these, a considerable number of negroes died in the suburbs, and were buried in vacant lots near the city, by parties of their own color, without applying to the regular undertakers. Fifty-three are said to have been thus buried in one place, not more than a fourth of whom procured coffins from the undertakers. The cases thus occurring of which no account is had, added to those who died previous to the 7th of June, it is thought, will bring the number fully up to 750, thus showing that the mortality of this year has been fully equal in number to that of 1866, while the death-rate according to population has been considerably larger. Thus we find that from the 7th to the 30th of September, in that year, both days inclusive, the number who died from cholera was 659. It is also probable that a greater number were attacked this year who recovered, than in 1866. The disease has followed the old cholera track in its former visits to this city, and its greatest mortality has been in the belt in which the largest mortality resulted from previous visits, showing conclusively that there must be something local which invites this pestilence to revel in the lower portions of the city, where the water is unquestionably bad, and the sewerage of such inferior character as scarcely to deserve the name.

The following article appeared in the *Nashville Union and American* of June 29th:—

SOME FACTS ABOUT CHOLERA IN NASHVILLE.

"In August, 1867, Dr. Joseph Jones, then at the head of the Board of Health, submitted to that body an elaborate report on the health and sanitary condition of Nashville, from which we learn many interesting facts which will be of peculiar interest just now. Of the summer succeeding the terrible cholera visitation of 1866, Dr. Jones says:

"'The kindling of the embers of the cholera in several of the cities and towns of the Mississippi valley, has kept the minds of many in an excited and anxious state. During the quarter ending July 31st, no increase in the death rate from local affections has been noted, but there has been on the contrary, a most encouraging exemption from this class of diseases.'

"Dr. Jones prepared after great trouble and research a table, which shows the total number of deaths in each year, from 1822 to 1866, and the table shows the number of deaths in each month of the year, from 1828. There are also tables showing the death rates, and the per cent. of deaths to the inhabitants of the city.

"It would appear from these statistics that the death-rate of Nashville has increased with the growth of the city. This increase in the death-rate of the city appears to be due to several causes, but chiefly to the progressive crowding of the houses along the narrow streets; the filling up of the lowlands along Lick Branch and Wilson's Spring Branch, with offal and filth of every kind; the extension of the city along and over the low grounds; the absence of all parks for exercise and pleasure, and the absence of any regular system of sewerage and drainage. The causes of disease have increased with the crowding of houses within limited areas, and the concurrent multiplication of filth, and improperly drained and policed alleys. * * *

"The death-rate of Nashville, in comparison with that of many other cities, has been without doubt both relatively and actually increased by the ravages of imported and exotic pestilence. Cholera caused nearly one tenth of all the deaths recorded in the city of Nashville, from 1821 to 1867, or more accurately during this period 20,248 deaths and burials were recorded, and of this number Asiatic cholera directly caused 1,813; and if we add to this the deaths really caused by this pestilence, but recorded as cholera infantum and diarrhœa, the number would exceed 2,000 and perhaps reach near 3,000. Up to the last epidemic of Asiatic cholera the heaviest mortality has fallen in the months of May, June and July. In former epidemics the rise and progress of the disease appeared to be connected, in a measure, with the increased maximum and decline of solar heat, during the hottest months of the year; and from such facts it would have been unreasonable to draw the conclusion, that the probabilities of a cholera epidemic were diminished daily; but the epidemic of 1866 reversed the former order of things. The cholera appeared the last day of August, reached its maximum in September (670 deaths occurring in this single month), and rapidly declined and disappeared entirely in October. A careful consideration of these facts leads to the belief that while the spread of the disease may be greatly promoted by the external temperature, at the same time, the appearance and spread of the disease is intimately associated with, if not absolutely dependent upon the time of its importation, and the hygienic condition of the city at the time of its introduction.

"The recent civil war has left the city of Nashville a most dangerous inheritance, in the numerous small wooden houses and shanties huddled together in the environs of the city, without system, without regular streets, and without any facilities for the enforcement of hygienic regulations. There gangrenous belts which encircle the business portion of the city with their crowded and oftentimes destitute inhabitants, form a most favorable field for the lodgment and spread of such diseases as smallpox and cholera. It is difficult if not impossible to devise any efficient measures for the arrest of contagious diseases amongst the inhabitants of these small wooden huts, which in almost every case are wholly deficient in ventilation, and crowded with old bedding, clothes and rags. * * * As the case now stands, cholera might appear and prevail amongst the poor and destitute and distressed inhabitants of Nashville, for days before its presence might even be suspected.

"The chief source of danger in the future, as was clearly demonstrated by the experience of the past epidemic, will be from the over-crowded and filthy portion of the city."

From a letter of an old citizen of Nashville, bearing date of June 30th, and headed "Cholera in the Olden Time," we extract the following interesting facts:—

"I believe the first, and perhaps most fatal malady we have ever had, occurred early in the year 1816. Nashville at that time was a mere village. It was called the 'epidemic' or 'cold plague.' Great numbers died. Whole families were swept off by the disease. * * *

"The next epidemic was cholera, which made its first appearance here in the fall of 1832. An old gentleman died in August or September, and his death was attributed at that time by the physicians to cholera; but no other case occurring for some time afterwards, they doubted the correctness of their opinion on the subject. The first unmistakable case occurred in

November—that of Mr. Hazel, a cabinet maker, and a much respected man. After his death, there were cases occurring more or less frequently throughout the following winter and spring. Dr. James Roane died in February, 1833. * * * Towards the close of May, and thence to the middle or latler part of June, it raged with great violence. The penitentiary had at that time but few convicts; yet the deaths there from cholera numbered about seventy. The most unaccountable freak of cholera during its visitation that year, occurred at Shelbyville, Tenn. Towards the latter part of June, or early in July, after its subsidence in Nashville, it rushed on that place in the night, with the rapidity and violence of a tornado. There had been no appearance of disease of any kind whatever, and the inhabitants of Shelbyville, on Friday night, retired to rest in apparent good health, but before daylight that morning, many were dead and dying! A panic and stampede was the result, and many died in the country, and some on the road-side, soon after fleeing from town. Out of a population of 600 or 700, about 115 died. The cause that produced this sudden and dreadful scourge in the town, has never been, and probably never will be satisfactorily explained. 'It is past finding out.'

"If I remember aright the town of Hannibal in the upper Mississippi had a similar visitation from cholera in 1832 or 1833. There, too, it came on like a clap of thunder out of a cloudless sky, without premonitory symptoms or warning of any kind; and I think attended with much greater fatality than in Shelbyville."

During the present epidemic, June and July, 1873, cholera has made its appearance and prevailed with various degrees of severity in Greenville, Chattanooga, Shelbyville, White Bluff, Waverley, Knoxville, Murfreesboro', Lebanon, Springfield, and other small towns and villages in Tennessee. The disease continues to prevail also in several of the parishes of Louisiana, bordering on the Mississippi.

There can therefore be no longer any doubt as to the nature of the so-called "CHOLERA SPORADICA" of New Orleans in 1873.

Respectfully,
JOSEPH JONES, M.D.

MESSRS. EDITORS,—Your words in the last JOURNAL are so timely, that they must not be passed over without remark. "A large appropriation" could not be better expended than in *watering the streets.* In fact it would be an economical outlay in many respects—in one especially which ought to carry weight with officials—the cost of repairs of watered streets would be materially reduced. On this subject, however, the suggestions of this JOURNAL, last summer, are so true and so applicable, that they should be repeatedly placed before those in authority, and the community also, who would be greatly benefited by their adoption:—

"Every man, woman and child, that walks or drives through a dusty street, or whose dwelling borders upon one, is constantly *inhaling a pulverized compound of granite and dung*, disgusting in itself, and in its consequences fearful to contemplate. Furthermore, any one whe will give attention to the subject, will soon perceive that in the wear of the streets themselves, of the vehicles drawn over them, and of the clothing of those who walk through them, there are tangible consequential damages of greater cost to the community than the amount of taxes required for thorough watering, which would save all this expensive wear and tear, in addition to the healthiness promoted by it."

Add, also, the great damage done to the eyes, from the glare of the hot streets—the headaches thus caused—the diseases engendered thereby—the moral effects of the *unnecessary* language uttered by passers as they receive gusts of filth, and you have, Messrs. Editors, a strong case for the Health Commissioners, to say nothing of the necessity for the "benefit of clergy." Pray induce those having the power to mitigate the sufferings of the people, the whole people, by a daily sprinkling of the STREETS.

Medical Miscellany.

DR. BAZIN, the well known professor of Dermatology at the Hospital of St. Louis, was recently made an Officer of the Legion of Honor on retiring from his hospital office.

ILLNESS OF NELATON.—We regret to hear from our correspondent in Paris, that Dr. Nelaton, the celebrated surgeon, is lying so dangerously ill that little or no hope can be entertained of his recovery. He has been for some time suffering from cardiac affection.—*Medical Times and Gazette.*

THE MEDICAL EVIDENCE IN THE TICHBORNE TRIAL, shows the treatment of twenty years ago to be decidedly heroic in its character. Bleeding from the arm, the ankle and the temporal artery, were evidently freely resorted to, and the issue was the most common form of counter-irritation.

WE are glad to note that the genial Dr. Druitt has been made the recipient of a very handsome testimonial in the shape of a silver cup and a balance of £1,284. Dr. Druitt, so well known in Canada by his popular text-book on Surgery, is travelling in India for the benefit of his health.—*Canadian Med. Times.*

DR. EDWARD WARREN, late professor of Surgery in the College of Physicians and Surgeons, Baltimore, Md., and most favorably known to the profession by reason of his testimony in the celebrated Wharton-Ketchum trial, has accepted the position of "Surgeon to the Staff of the Khedive of Egypt," with the rank of colonel, and the privilege of engaging in private practice in that country.—*Canadian Medical Times.*

THE Imparziale, of Florence, mentions that the embalming of the illustrious poet Manzoni was performed by the municipal doctors, by means of injections and washes with a hydro-alcoholic solution of chloride of zinc, and was eminently successful, thus affording the seventy thousand people who visited the remains of the poet the satisfaction of witnessing again his sympathetic countenance.

PROFESSOR ERICHSEN.—It is a matter of general regret, that Mr. Erichsen's state of health has been for some time such as to cause anxiety to his numerous professional friends. Mr. Erichsen was, we understand, somewhat out of health during the winter, and early in the spring he unfortunately wounded his finger, and had lymphatic inflammation with probably some degree of blood-poisoning. This completely prostrated him for the time, but he is now, we are glad to hear, considerably improved, though in the opinion of his colleagues, Sir William Jenner and Sir H. Thompson, it will be some time before he can resume his professional labors.

HOW TO USE UP USELESS DOGS AND CATS.—Only fancy, dear Mr. Scotsman, our feelings this morning, when me and the cat were reading you, and came to this under your title of "Specific Articles Wanted":—

Dogs and Cats (few useless) wanted. Any kind of breed will suit. Apply at the Physiological Laboratory, University, between 10 and 11 A. M.

"What's the meaning of that?" says the cat to me. "The meaning," says I to the cat, "is that some philosophers (for I am a doctor's dog) want to find out all about our reflex actions and our ganglionic systems, to snip out neat little bits from our nerves and brains, and give us nice little shocks from batteries, and nice little doses of the Calabar bean, and nice little antidotes, and put all about how we behave ourselves into a book, and dissect us nicely *afterwards*—isn't this nice, pussy?"

Is it seemly or kind, is it what is due to us, to put in this horribly suggestive advertisement? If we dogs were uppermost, and were young doctors of an inquiring turn, how would you men like to see an advertisement in the

Canine Tooth of the day—"Men and Women and Children (few useless)"—isn't this, by-the-by, bad grammar or nonsense?—"any kind of breed, &c." Would you not feel insulted? And how would you like, even under chloroform, to have your reflex actions inquired into, and your *hippocampi minores* tickled with a knife, and your spinal marrow tampered with? Dogs and cats have "feelin's" as well as you. Yours truly and growlingly. BOB.

P. S.—My master has just come down to breakfast, and is reading *it*. He says, "Bob, if it's a joke, it's a very poor one; if not, it's worse. I'll let them know at the Physiological Laboratory, that the eye of the Society for the Prevention of Cruelty to Animals, and the eye, too, of Capt. John Cumming, 17 Drummond Street, is upon them."

I and my master, and Sir Charles Bell, and the late Professor Syme, have our own views as to the question of vivisection; but I only speak now of an outrage and insult to me and the cat.—*Edinburgh Scotsman.*

NOTES AND QUERIES.

THE REV. LAURENCE STERNE,' the genial author of *Tristram Shandy*, did not much like the therapeutics of his day, and would have rejoiced at the motto—*natura duce*—of the Massachusetts Medical Society. He thus speaks of his treatment at the hands of the big-wigs of the last century:—"I fell ill of an epidemic vile fever, which killed hundreds about me. The physicians here are the errantest charlatans in Europe, or the most ignorant of all pretending fools. I withdrew what was left of me out of their hands and recommended myself entirely to Dame Nature. She (gentle goddess) has saved me in fifty different pinching bouts, and I begin to have a kind of enthusiasm now in her favor, and in my own, that one or two more escapes will make me believe I shall leave you all at last by translation, and not by fair death."

Judging by the following prescription, he had a fair right to rail:—"My physicians have almost poisoned me with what they call *bouillons refraichissants.* 'Tis a cock flayed alive and boiled with poppy-seeds, then pounded in a mortar and afterwards passed through a sieve. There is to be one craw-fish in it, and I was gravely told it must be a male one; a female would do me more hurt than good."

ERRATA.—Page 75, last line, for "Fleurens" read *Flourens.* Page 77, 15th and 19th lines from top, for "Bean" read *Beau.*

DIED,—At Boston Highlands, 29th ult., John Hart, M.D., 49 years.—2d inst., L. R. Sheldon, M.D., 45 years 5 months.

MORTALITY IN MASSACHUSETTS.—*Deaths in seventeen Cities and Towns for the week ending July* 19, 1873.

Boston, 181—Charlestown, 31—Worcester, 27—Lowell, 39—Milford, 2—Chelsea, 16—Cambridge, 31—Salem, 18—Lawrence, 30—Springfield, 15—Lynn, 15—Fitchburg, 5—Newburyport, 6—Somerville, 8—Fall River, 26—Haverhill, 10—Holyoke, 18. Total, 478.

Prevalent Diseases.—Cholera infantum, 136—consumption, 57—dysentery and diarrhœa, 31—scarlet fever, 18—cholera morbus, 10.

Six deaths from smallpox occurred in Holyoke.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, August 2, 205. Males, 114; females, 91. Accident, 5—apoplexy, 3—inflammation of the bowels, 3—disease of the bladder, 1—bronchitis, 3—inflammation of the brain, 1—disease of the brain, 6—cancer, 3—cholera infantum, 55—cholera morbus, 6—consumption, 14—convulsions, 3—cerebro-spinal meningitis, 3—debility, 3—diarrhœa, 7—dropsy of the brain, 10—drowned, 2—dysentery, 5—scarlet fever, 11—typhoid fever, 8—fistula in ano, 1—gastritis, 1—disease of the hip, 2—disease of the heart, 6—imperforate rectum, 1—disease of the kidneys, 3—disease of the liver, 3—congestion of the lungs, 1—inflammation of the lungs, 5—marasmus, 6—measles, 2—old age, 4—paralysis, 4—premature birth, 1—puerperal disease, 2—rheumatism, 1—sunstroke, 1—suicide, 1—tumor, 1—whooping cough, 2—unknown, 6.

Under 5 years of age, 119—between 5 and 20 years, 16—between 20 and 40 years, 31—between 40 and 60 years, 19—over 60 years, 20. Born in the United States, 153—Ireland, 39—other places, 13.

THE

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Original Communications.

CHILDREN'S DISEASES IN MASSACHUSETTS.

By J. O. WEBSTER, M.D. HARV.

Read before the Massachusetts Medical Society, June 5th, 1873.

IN selecting the subject of "Children's Diseases in Massachusetts," to bring before the Society at this time, I have been influenced by several considerations; chief among which are the importance of the diseases of children, the inadequate amount of attention that they have received, and the fearful infant mortality that prevails, especially in our larger cities.

The importance of children's diseases can hardly be over-estimated, concerning, as they do, those in whom the wealth of the community so largely consists, those upon whose soundness of body and of mind the hopes of the future so greatly depend.

The death of an individual, in or before the prime of life, inflicts a very considerable positive or prospective loss on the commonwealth. No other kind of loss would be borne with such equanimity, with so little attempt to discover and remedy its causes. The idea is too firmly fixed in the public mind that about *such an amount* of infant mortality is inevitable; an idea that receives much color from the mortality tables of various countries, but which we must regard as contrary to a sound philosophy. We would rather regard the death of a child as always an unnatural event, for which somebody, some where and at some time, has been to blame.

Children's diseases have not received and are not now receiving, from the profession at large, the attention that their importance demands. Without committing the absurdity of saying that they differ in nature from the diseases of adult life, we claim that they have such differences, in their course and symptoms, impressed upon them by the peculiarities of the infant constitution that they require to be studied almost from a point of view of their own; yet our medical schools are sadly deficient in professorships of children's diseases and in clinical advantages for their study, and their graduates are sent out with less knowledge of these than of any other affections they are likely to be called upon to treat. And although the literature of children's diseases is equal to that of any other branch of medicine, it is to be feared that there are too many physicians' libraries in which no work, devoted to this subject, can be found, or only some venerable volume that has long outlived its usefulness.

The rate of infant mortality, especially in our larger cities, is a subject of the profoundest interest to the social scientist, the sanitarian and the physician, to all of whom our registration reports present abundant food for study and reflection. The examinations that I have made of these reports, in reference to infant mortality, cover the six years 1865 to 1870 inclusive, and the deaths in the first five years of life. From these data, except where otherwise stated, are derived whatever facts I shall present in regard to the infant mortality of Massachusetts.

Proportion of infant mortality to 1,000 of population, in Massachusetts, and in the eleven cities having now a population of over 20,000 each.

	Population.	1865.	1866.	1867.	1868.	1869.	1870.
Massachusetts,	1,000	7.15	6.21	6.27	6.42	6.32	6.77
Eleven cities,	1,000	9.12	8.54	8.89	8.55	8.41	9.02
Rest of State,	1,000	6.18	4.88	4.79	5.11	5.15	5.27

For the years referred to, we find the infant mortality in the State to average about 6 1-2 in 1,000 of population; the highest rate being 7 1-4 in 1865, when diphtheria and dysentery were both epidemic, the lowest 6 1-5 in 1866. Taking the eleven largest cities, those of 20,000 and upwards population, we find their rate 8 3-4 per 1,000, while for the remainder of the State it is reduced to 5 1-5.

Percentage of deaths, in the first five years of life, to births.

	1st year.	2d year.	3d year.	4th year.	5th year.
Massachusetts (1865-70),	14.9	5.3	2.5	1.6	1.1
Eleven cities "	18.7	6.8	2.9	1.9	1.3
Rest of State "	12.3	4.3	2.2	1.4	1.0
England (Life table),	14.6	5.2	2.7	1.8	1.3

Looking at the subject from another point of view, we find that, of the children born alive in Massachusetts, about 15 per cent. die in the first year, 5 in the second, 2 1-2 in the third, 1 1-2 in the fourth, and 1 in the fifth, and that these figures are almost identical with those from the English Life Table. We also discover that, in the cities already referred to, 18 1-2 per cent. die in the first year, 6 4-5 in the second, 2 3-4 in the third, while for the fourth and fifth the mortality is only slightly in excess of that for the State at large.

We next purpose to glance at the causes of disease and mortality among the children of Massachusetts. We did intend to divide these causes into two classes, avoidable and unavoidable, but found so few that would strictly come under the latter head that we were forced to abandon the plan as impracticable. The arrangement that we have adopted is a natural one, taking up the causes in the order in which, beginning from his birth, a child would probably be exposed to their influence, as follows: congenital diseases and diatheses; residence; season; transgressions of sanitary laws, especially in regard to food, clothing, ventilation, exposure to improper temperatures and dosing; dentition; epidemic influences and infection.

CONGENITAL DISEASES AND DIATHESES.

Congenital diseases proper do not occasion a very serious amount of mortality, but of congenital diatheses this is by no means true. Tubercular and scrofulous diseases are the occasion of over ten per cent. of the deaths under five. In regard to the syphilitic diathesis, we cannot present statistics to show the number of its victims, but we know that the feebleness of constitution of the children of syphilitic parents renders them an easy prey to the various diseases of the developmental period, besides making them peculiarly liable to those low forms of inflammation that are called "scrofula."

Under the head of diathesis, we also find it convenient to class inherited weakness of constitution. The deaths most obviously due to this cause are those classed as "infantile," which comprise 8 per cent. of our infant mortality; but a very large proportion of the deaths of young children are due to their constitutional feebleness which renders them unable to bear up under attacks of illness that are, in themselves, quite trivial.

Of no class of sins is it truer than of sins against the laws of health, that the iniquities of the parents are visited upon the children; and while so many parents habitually violate every hygienic precept, children will continue to be born only to die in infancy.

RESIDENCE.

We have already referred to the infant mortality of our cities, especially in the first two years of life, when we find it bears the relation to that in the remainder of the State of 3 to 2.

The reason of this undesirable preëminence may be easily arrived at by an examination of the "Analysis of the mortality of Boston in 1870," in the Report of the State Board of Health, 1871. The Health Districts in which the greatest infant mortality occurred were those crowded with tenements, full of nuisances, and inhabited by a class of people that are neglectful of the entire code of sanitary laws. Such localities, with such inhabitants, are found only in large cities. They help to swell the aggregate of mortality, and make the reputation of the whole city suffer; unjustly so, since the best districts in Boston have a remarkably low rate of infant mortality. Hence we conclude that residence in a city, other things being equal, is as healthy for children as in the country.

Whatever influence locality of residence has upon mortality appears to act in the same manner upon infants and adults, except that the former are more susceptible than the latter to unhealthy surroundings. If we arrange the counties of Massachusetts in the order of *infant* and of *general mortality*, for 1870, the two lists are identical with the single exception of Nantucket, where the former is very low and the latter high, from well known causes.

SEASON.

The influence of season upon infant disease and mortality is so well known to all, that it would seem superfluous to indulge in any extended remarks upon this part of our subject; nevertheless, it will be interesting to glance briefly at the mortality tables from this point of view. Of the infant mortality of Massachusetts, about 20 per cent. occurs in the first quarter of the year, 20 in the second, 37 in the third, and 23 in the fourth. The high percentage in the summer months is due to the fact that intestinal diseases, the most important factors in our infant mortality, are those that are most influenced by season.

Mean Quarterly percentage of the Mortality from Cholera Infantum, Diarrhœa and Dysentery, and mean temperature, for six years, 1865-70.

	1st quarter.	2d quarter.	3d quarter.	4th quarter.	Total.
Cholera Infantum, .	1.63	3.88	84.46	10.03	100
Diarrhœa, ...	10.97	10.98	57.46	20.59	100
Dysentery, ...	3.07	5.47	76.43	15 03	100
Mean temperature, F.	26.8°	55.2°	67.0°	38.3°	46.8°

We find 84 per cent. of the deaths from cholera infantum, 57 per cent. from diarrhœa, and 76 per cent. from dysentery occurring in the 3d quarter.

The cold season, and the changeable weather of spring, are most fruitful in diseases of the respiratory system, about 60 per cent. of the mortality from pneumonia being from December to April, and the same proportion of that from croup, from November to March. Diphtheria has 40 per cent. of its mortality from October to January, but consumption destroys about an equal number of lives in every month of the year.

The fatality of the eruptive fevers appears to be affected by season, as 70 per cent. of the deaths from measles take place in the six months from March to August, and 65 per cent. of those from scarlatina in the six months from December to May.

TRANSGRESSIONS OF SANITARY LAWS.

To show how largely neglect of sanitary laws is responsible for infant mortality, it is only necessary to cite the case of those most conspicuous for their habitual violation of all such laws, our foreign population. For the four years, 1867-70, of all those dying in Massachusetts under the age of five years, 41.5 per cent. were of American and 58.5 per cent. of foreign parentage; while of the total mortality 55 per cent. were of American and only 45 of foreign parentage (Reg. Rep. 1870, p. 39).

In the Board of Health Report already referred to, we find that the infant mortality is very great in those parts of Boston inhabited by a class of people who are indifferent to the laws of health, being, in the worst districts, five times as great as in some peopled by the better class of Americans. We are inclined to attribute the variation in mortality of the districts almost entirely to the difference in regard to obeying sanitary laws. Natural advantages of location do not, by any means, rest with the healthiest districts.

FOOD.

Eighteen per cent. of our infant mortality occurs from diseases that can mostly be attributed to improper food. So many of our women are unable to nurse their children, and, even for those who can afford the expense, so difficult is it to procure the services of wet nurses, that artificial feeding has become probably the leading cause of the mortality among young infants. Artificial feeding is bad enough at the best, but we have all experienced how impossible it is, in most cases, to get the best method carried out. The community contains so many venerable females who know so much more than the doctors about feeding babies, who are so ready with advice on the subject, whether asked or not, and who are so absolutely certain that their way is right and any other leads to certain destruction, that no wonder young mothers give more weight to their experience than to our views, which they are apt to consider rather theoretical than practical. Consequently the poor babies are starved on arrowroot and other indigestible substances and die of marasmus or cholera.

But infants sometimes perish from improper food when fed solely from the breast. Many women, either from delicacy of constitution, from poverty and hardships, or from disease or intemperance, secrete a lacteal fluid insufficient in quantity or deleterious in quality, and their babies die of inanition or disease.

For older children the case is still worse if possible. How often, when called to attend a child, perhaps only in his second year, on asking what he is in the habit of eating, it happens to us to be answered, "oh, whatever the rest eat," which too frequently means pork and beans, brown bread, fried meats, hot biscuit, rich cake and the inevitable pie. *Credite experienti.*

CLOTHING.

If improper food holds the first place among the causes of infant mortality, unsuitable clothing follows not far behind. Fashion has, of late, come to the rescue in some measure, and prescribes a more rational dress for children than formerly; but infants in the first few months are still too often seen with naked arms and chests; and when the advent of short clothes arrives, the bare legs look "so cunning" that they are too apt to be left uncovered, even in winter.

As a rule, the clothing of children, all through the developmental period, presents a striking contrast to that found necessary for comfort by adults in the same temperature, while their ability of enduring cold presents an equal contrast, but in the opposite direction. It is of no use to argue the case with the average young mother; "it is the fashion" far outweighs, with her, "it is healthy." For those who are *above* the average, and inclined to follow the rules of common sense rather than the behests of fashion, one simple direction will suffice; always to dress a child more warmly than is required by an adult for the same temperature.

VENTILATION.

The quality of the air in their homes affects children more than adults for two reasons, the greater amount of time they pass within doors and their greater susceptibility to all morbid influences. We doubt not that the breathing of deoxygenated and impure air is one of the chief causes of scrofula and rachitis among children, deprivation of light being another important cause. At all events, a large part of the scrofulous and rachitic children are found among that class of our population who have not a due appreciation of the value of pure air and sunlight. Any one who wishes to see this part of our subject illustrated, can be abundantly gratified by a visit to almost any tenement house occupied by the lower class of foreigners or negroes.

IMPROPER TEMPERATURES.

Although the hardening process is not so much in vogue as it once was, traces of it still remain in two ideas that are strongly rooted in the minds of the community; that it is good for children to be taken out of doors every day, no matter what the temperature, and that it is healthy to sleep in a cold room.

It should be borne in mind that directions given for other countries, with very different climates, are not necessarily adapted to us, and because English writers advise that babies should be taken in the open air every day, it does not follow that the same should be done in Massachusetts. Many children are brought to premature graves every year by being exposed to our winter temperatures, which are habitually much lower than a child in the first two years of life can ear without injury. Dr. Holmes's idea of rearing under glass is onlyb a strong way of expressing the care that is necessary to bring children safely through our New England winters.

In accordance with the second idea we have mentioned, children, and even tender infants, are put to sleep in rooms where the temperature falls to or below the freezing point. Although a vigorous adult *may* endure such treatment without suffering any very obvious consequences, with a young child it is far otherwise. Air, at the temperature of 50° F., is probably as cold as an infant can breathe, without danger, while the vital powers are reduced by sleep.

DOSING.

So prevalent is the habit of *dosing* among all classes, and so sensitive is the infant organism to the action of drugs, that it is not surprising that here should be found quite an important source of disease and death among children. The immense sales of the popular soothing syrups and analogous nostrums, containing large proportions of opium, testify to the reckless drugging of which mothers and nurses are guilty. For an account of the effects of these opiate preparations, I quote the words of Dr. Tanner: "General emaciation, a withered, sallow countenance, red and swollen eyelids, derangement of the digestive organs with loss of appetite, and constipation of the bowels, with white stools."* If their use is continued, the child goes on from bad to worse, and dies in a state of marasmus.

Purgatives are excessively used even more generally than opiates, and are commonly considered the proper thing to give, to begin with, in almost any disease of childhood; so that many a simple diarrhœa becomes a severe enteritis by the assistance of a dose of castor oil; and many a child is rendered feeble and anæmic by the use of vermifuges and terebinthinate mixtures given for hypothetical worms.

DENTITION.

About three per cent. of the infant mortality of Massachusetts is attributed directly to dentition. Probably many deaths from other diseases are owing to it indirectly. It seems strange that a physiological process should be the occasion of so much loss of life, and physicians of high standing are not wanting, who deny that dentition exerts any special influence in the etiology of children's diseases, considering the supposed cases of this influence to be mere coincidences. Undoubtedly some have rated it too highly, but it appears well established that the child, during dentition, is more obnoxious than at other times to inflammatory affections of the nervous, respiratory and digestive systems.

The influence of dentition in the production of bowel diseases has probably been over-estimated, for this reason, that the follicles of the intestines are developing at the same time that the eruption of the teeth is taking place, and much less powerful exciting causes are necessary to produce diarrhœa than at other times. We also find that teething is more commonly attended with diarrhœa in summer and autumn than in winter.† Finally, diarrhœa is a rare accompaniment of dentition in infants reared at the breast.

Convulsions are quite often met with during teething, and are attributed to the undeveloped condition of the brain, whence the spinal nervous system, being without the restraining influence of the will, is excited to reflex action by very slight local irritations, in this case by the pressure of a tooth upon the inflamed gum. This affection, too, occurs mostly in infants fed artificially.‡

The increased liability of teething children to cephalitis, bronchitis and pneumonia is not so easily explained. Vogel, however, perhaps rather fancifully, attributes the bronchitis to the wetting of the clothes over the chest by the saliva, which is so freely secreted at this time.§

(To be concluded.)

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* Diseases of Children. 2d Amer. Ed. p. 94.

† Smith. Wasting Diseases of Children. 1st Amer. Ed. p. 60.

‡ Clinical Lecture by F. Minot, M.D. Boston Med. and Surg. Jour., Jan. 2, 1873.

§ Diseases of Children. Amer. Ed. p. 110.

Progress in Medicine.

REPORT ON PUBLIC HEALTH.

By George Derby, M.D.

Asiatic Cholera in the United States.

The epidemic of 1873 has fairly begun. Its history must be given at a future time, but we can now record such facts as have come to us from trustworthy sources. The reports of the daily newspapers cannot be relied on, and we are therefore dependent for information on official weekly reports of the boards of health of several western cities and upon private correspondence. There is reason to believe that the interests of trade may even color some of these official documents; as, for instance, when we see seven deaths ascribed to cholera and twenty-five to cholera morbus. From the best evidence attainable at this time (August 4th), it is pretty certain that the disease first appeared in New Orleans some time during the month of April. There is nothing, however, as yet to show whether it was recently imported from Europe, or was a revival of the old seed of cholera left in that region from the epidemic of 1866. The disease was not known to exist in any part of Western Europe during the last winter or spring, but was distinctly recognized in Russia and Hungary, and its presence was spoken of at several other points. It is not difficult to see that among the emigrants arriving at New Orleans it may have been brought in an unsuspected way. There is no proof of its exact origin at New Orleans, but by the middle of May it was causing in that city a mortality of thirty a week. Thence it extended northward to Memphis, Natchez, and several other points on the lower Mississippi. Nashville, in Tennessee, was next attacked, and here the disease became for the first time virulent. The mortality, among the negroes especially, was very great, and the people were much alarmed. Its presence was next reported at several small towns in Tennessee and Kentucky and Missouri; then at Cincinnati, St. Louis and Louisville, but at neither of those great cities have the ravages of cholera been as yet very marked. Thirty deaths a week in St. Louis, in a general mortality of about two hundred, does not indicate a severe epidemic. Cholera has not at the present time been distinctly recognized on the Atlantic seaboard, nor have we heard of it as yet in the cities about the headwaters of the Ohio river. That it will come before long, there seems little reason to doubt.

Now is the time of all others to turn to advantage the public apprehension of the scourge, and to promote all measures which tend to secure the permanent purity of water and of air.

Prostitution controlled by Sanitary Law.

Many European cities have attempted to restrain and regulate this evil, which law can nowhere suppress. Their success has been but partial; never quite satisfactory, yet on the whole such as warranted the continuance of the system of public regulation. Recently, it has been tried in England, under the "Contagious Diseases Act," which applies only to the population of certain naval and military towns.

It would appear, from the British medical journals, that the effect of the law in diminishing venereal diseases in the public service has been most gratifying, and great efforts are now making, with a general but not universal support from the medical profession, to extend the provisions of this act to the whole English population.

It is a little remarkable that a law of this character should prove to be better adapted to English than to Continental communities, and even more surprising that it should be found to work still better in an American city. Yet this seems to be the case. The city of St. Louis, with a present population of about 400,000, has been trying this experiment for several years. It seems to have been adopted by the medical profession acting through the Board of Health, and by the police, as the best available means of diminishing disease and crime; of ridding the dispensaries and hospitals, and private practitioners of a flood of venereal cases, and of ridding the streets, bar-rooms, courts, and public places of scenes of scandal and disorder. It is claimed by the medical and police authorities to have accomplished all this in a quiet way, without oppression, and, moreover, that its operation is satisfactory, even to the parties whose freedom is put under restraint. Every prostitute is registered, and visited and examined for signs of disease once a week by medical officers appointed by the Board of Health. For this examination, a fee of a dollar and a half is collected, and every keeper of a bawdy-house pays fourteen dollars a month. All cases of venereal disease are transferred immediately to a hospital outside the city, which has been built for the purpose, where they are treated without charge. There are about 700 prostitutes in St. Louis, and the number is not greater now than six years ago, notwithstanding the prodigious increase of the general population.

The revenue to the health authorities from the special taxes above named amounts to $55,000 a year.

Venereal diseases have greatly diminished in number in St. Louis. This is true of private practice and of public institutions, and seems to be the universal judgment of the medical profession.

That there is violent opposition to this law on moral grounds is not to be overlooked. All the clergy oppose it, and even some physicians, while recognizing its good effects, believe that the means employed are unjustifiable. Meanwhile, the people seem quite willing to have the experiment go on. It is certainly one of extreme interest, and it will be carefully watched by other communities, both in this and foreign countries.

A Handbook of Hygiene. By George Wilson, M.D., Physician to Convict Prison, Portsmouth, England. Re-printed by Lindsay & Blakiston. 1873.

This book is to be commended without qualification. For the general use of physicians, of health boards, and of all those who are interested in the prevention of disease, it is a safe guide; giving the latest results of scientific research in an intelligible form, and furnishing replies to the perplexing questions which are constantly arising, as definite and clear as the existing state of knowledge will allow. Recent laws, both in France and England, have created a demand for books on hygiene, and the supply is abundant from mere bookmakers. Dr. Wilson's volume is not to be classed with them. It is evidently the work of an intelligent physician, whose special occupation in connection with a great prison has turned his thoughts to the preservation of the health of those in his charge, and has given him opportunity not only to prove the value of the opinions of Parkes, Pettenkofer, Simon, Morin, and other leading minds of the present day, but also to make valuable original observations. The chapters on Food and Ventilation seem to us of special interest.

Parkes' Manual of Hygiene must still be regarded as the highest authority on all the various subjects of which it treats; but for those who wish for a more brief and elementary treatise, Dr. Wilson's handbook will be found excellent.

Beziehungen der Luft zu Kleidung, Wohnung und Boden. Drei populäre Vorlesungen von Dr. MAX V. PETTENKOFER. 1872.

The Relations of the Atmosphere to the Clothing, Dwellings and the Ground. Three popular Lectures delivered by Dr. MAX V. PETTENKOFER.

The following is an abstract of these lectures, which deal with subjects lying at the foundation of sanitary science. The lessons they teach must be repeated in every form, and, surely, no one can present them with more force than Dr. Pettenkofer. Familiar truths are placed by him in new lights, and truths half recognized by the world, like the permeability of so-called solid bodies by the atmosphere, are made clear and practical.

The air, he says, is required by human beings principally for two purposes—for nourishing and for cooling the body. During twenty-four hours, an adult inhales and exhales, on the average, 9,000 litres, or about 360 cubic feet, 3,000 times as much, in volume, as he consumes in food and drink. Air being 770 times lighter than water, the 9,000 litres would weigh 11½ kilogrammes, or 23 pounds.

The proper performance of the functions of the body requires the maintenance of a definite temperature of the blood, which cannot vary in the individual more than one degree without injury to the health, and is nearly the same in man in every locality and under all circumstances, there being a difference of only about one-tenth of a degree between the temperature of the blood of natives of the tropical and of arctic regions.

In an adult, under ordinary circumstances, 3,000,000 units of heat are generated in twenty-four hours. By a unit of heat (Wärmeeinheit) is meant the amount of heat required to raise the temperature of one gramme of water 1° C. The heat, then, generated within an adult, in twenty-four hours, would be sufficient to raise the temperature of 3,000 litres of water 1°, or 30 litres from 0° to 100° C., or to the boiling point.

In order to explain, in part, the uniformity of temperature of the body, we are to consider ourselves as warm and moist bodies enveloped by the cooler atmosphere. Such bodies lose their heat in three ways—by radiation, evaporation and conduction.

By radiation, the escape of heat from the body amounts to 50 per cent. of the whole quantity generated. By evaporation, the loss of heat was determined as follows:—A man at rest lost, in the breath and from the skin, frequently only 900 grammes of water in twenty-four hours; while engaged in active labor, on the other hand, he lost 2000 grammes in the same time. Assuming, then, that 560 units of heat are required to vaporize one gramme of water, the above amounts give 504,000 units of heat as consumed in a state of rest, and 1,120,000 in active exercise. These results furnish an explanation of the fact that, during the most arduous labor, the temperature of the blood is not increased; indeed, in some instances, it is diminished.

The escape of heat in the third way, by conduction, is dependent upon the condition of the surrounding atmosphere, the rapidity of its motion, the amount of moisture contained therein, and its temperature.

The author then considers these methods of the escape of heat from the body, as they are affected by the clothing.

Radiation is interrupted from the fact that the heat, which escapes in this way, must first traverse the clothing from the outer surface of which it must again radiate. The heat, then, instead of radiating directly from the body, is retained for a longer or shorter period, in immediate contact with it. So-called diathermanous substances, which permit the passage of rays of heat without interference, do not enter into the construction of clothing. The latter is composed only of materials which absorb the heat. The passage of heat through the clothing depends essentially upon the conductibility of the material, and upon its mass. The entire immediate envelope of the body becomes uniformly heated by the radiating heat, and so we avoid, as a rule, the numerous injurious effects which would otherwise result from the application of sudden changes of temperature to the surface of the body. In the cold of winter we lose our heat without the sensation of chilliness, because we transpose from the surface of our body to the clothes, the locality in which the difference between our temperature and that of the surrounding atmosphere is adjusted. In animals, the same purposes are fulfilled by the insensible skin, hair and feathers.

The constitution, properties and color of different materials, in their relations to the radiating heat, have been studied principally by Krieger (*Zeitschrift für Biologie*, Bd. v. p. 476). He experimented with a metallic cylinder containing warm water, around which were wrapped the different materials. By the use of two layers, e. g. of linen and wool, linen and silk, &c., he was enabled to determine whether more heat escaped by radiation, when linen or wool, &c., formed the external layer. No essential difference, however, was furnished by wool, wash-leather, silk, cotton and linen. Neither did the color of the material occasion any important variation.

By the employment of heat from luminous bodies, however, such as the sun or a flame, the results were different. Though with clothing of different materials, but of uniform color, the results did not vary much, an essential difference was observed with the various colors, as follows: White, or nearly white materials, gave the proportions enumerated under (1); with shirting of various colors, the proportions given under (2) were obtained:—

(1) Cotton	100
Linen	98
Flannel	102
Silk	108

(2) White	100
Pale yellow	102
Dark yellow	140
Bright green	155
Dark green	168
Turkey red	165
Light blue	198
Black	208

Hence, when exposed to the rays of the sun, we feel the heat the most with black, and the least with white clothing. The increase in the degree of the absorption of the heat by the different colors, is quite notable. When we stand in the shade, however, or under cover, the difference is very slight.

The estimation of the amount of hindrance to the radiation of heat from the body, occasioned by the clothing, composed of several layers, introduces the subject of the conductibility of the different materials.

In the experiments previously given, Krieger proved that the radiation was not essentially affected by the employment of single or double layers of material. Making use of similar cylinders, he estimated the loss of heat from the contained water after definite intervals, employing first single and then double layers of various materials which were wound tightly around the cylinders. The diminished escape of heat, in the two cases, as illustrated by the following table, furnished data for the calculation of the amount of retardation of the escaping heat occasioned by conduction:—

The following numbers express the retardation in per cent.

Thin silk	3
Gutta percha	4
Shirting	5
Fine linen	5
Thick silk	6
Home made, thick linen	9
Wash leather	10 to 12
Flannel	14
Light buck-skin	12
Heavy " "	16 to 26

In other words, if 100 units of heat escape with one layer of thin silk, only 97 will escape when two layers are employed. These figures, too, suggest the conclusion that the retardation is not due to the material itself and its weight alone, but that its form and volume have an important influence upon the results. Thin silk and thick silk, fine and coarse linen, are the same materials, and equal pieces of the different qualities do not differ in weight proportionately with the difference in retardation of the heat conduction. This fact may be proved by making use of common wadding. If this is closely packed around the cylinder, the amount of heat lost is increased sometimes to 40 per cent. In this case, the material and its weight remain unchanged, while its form and volume alone are altered. Hence it is, that a new coat is warmer than an old one.

Again, if the first layer be adjusted closely to the cylinder, while the second layer is separated by about 1-2 to 1 centimetre, just as we wear clothes which feel easy and comfortable, then the second layer will occasion a still greater hindrance to the escape of heat. Illustrations of this fact are numerous; e. g., tight fitting shoes and gloves are very cold in winter.

The explanation of these facts is found in the air which is contained within the clothing. It is a common notion that the clothes are intended to shut out the air from our bodies. On the other hand, it is the fact, that those materials which experience has proved to be the warmest for clothing, are much more permeable to the air than those which are commonly known as "cold materials." The author experimented with different materials, (vide Zeitschrift für Biologie, Bd. I., p. 170,) with the view of ascertaining the degree of their permeability to the air. During equal intervals, under uniform pressure, and with equal surfaces of the following materials, he found that they were permeated by the following relative quantities of air, the most porous, flannel, such as is used ordinarily for clothing, being taken at 100 :—Flannel, 100 ; linen of medium fineness, 58 ; silk, 40 ; buck-skin, 58 ; tanned leather, 1 ; chamois leather, 51. Hence, if the warmth of clothing depends upon the degree in which it keeps out the air from our bodies, then glove kid must be 100 times warmer than flannel, which, every one knows, is not the fact.

The whole question, then, is resolved into that of ventilation. If several layers of the same material be placed together, and the air be allowed to permeate through them, the ventilation through the second layer is not much less than through the first, since the meshes of the two form a system of continuous tubes of uniform diameter, and the rapidity of the movement of the air through these is affected merely by the resulting friction. Through our clothing, then, there passes a stream of air, the amount of which, as in ventilation, depends upon the size of the meshes, upon the difference of temperature between the external and internal atmosphere, and upon the velocity of the surrounding air. Our clothing, then, is required, not to prevent the admission of the air, but to regulate the same so that our nervous system shall be sensible of no movement in the air. Further, our clothes, at the same time, regulate the temperature of the contained air, as it passes through them, so that the temperature of the air between the clothing and the surface of our body averages 24° to 30° C.

The hygroscopic property of different materials used for clothing essentially modifies their functions. This property varies with the different materials ; wool, for instance, takes up more water than linen, while the latter takes up and gives off its watery contents more rapidly than the former. The more the air is displaced by water from the clothes, the less will be their power of retaining the heat ; in other words, they conduct the heat more readily, and hence we are quickly chilled by wet garments.

In the second lecture, the author considers the subject of the relations of the atmosphere to buildings. In general terms, the hygienic functions of the house are the same as those of the clothing. Its office is not to shut us out entirely from the external atmosphere. The substances employed in the construction of its walls, as we know, are permeable to water, and must, likewise, be permeable to air, to a certain degree, in order to insure comfort and health for any length of time. The common notion of the impermeability of the walls to air finds its explanation in the fact, that our ordinary sensations are not sensible of atmospheric movement when the velocity is less than one-half metre in the second. Every one knows that moisture will make its way entirely through even a thick wall. It must then be still more pervious to air, which is 770 times lighter than water, and more movable. By reason and analogy, then, and again by experiment, he demonstrates this latter fact in respect of wood, common mortar, bricks and most sand-stones. Compact lime or so-called quarry-stones, however, are very slightly or not in the least pervious to air. But it is to be borne in mind, that the intervals between these stones are filled with pervious mortar ; the more irregular the stones, of course, the greater is the amount of mortar employed. It has been estimated that, in a wall of lime stone, one-third, of calc-tuff, one-fourth, of bricks, one-fifth to one-sixth, and of sandstone blocks, one-sixth to one-eighth of the mass is composed of mortar. It will be seen that the amount of mortar increases with the diminution of the porosity of the stone, and so serves, in a measure, to equalize the amount of air contained in the wall. It will be evident that the amount of air which passes through the material of a wall, of certain thickness, increases proportionately with the superficial area, a subject which is considered later, more in detail.

The behavior of porous constructive materials with water is quite peculiar. As a rule, when the pores are filled with water, they are impervious to the air. The adhesion of water to stone or mortar is as much greater than that of air, as water is heavier than air, a fact of great importance in a hygienic point of view. We all know that the dampness of new buildings is to be feared. In most countries of Europe, the occupancy of new buildings is not permitted until they have been pronounced sufficiently dry by the proper authorities.

By calculation, he shows, that the walls of a new house, containing 167,000 bricks, each weighing five kilogrammes, contain 83,500 litres of water, at a low estimate, which must be got rid of before the house can be occupied without danger to the health. This can be effected only by evaporation, which would require the passage over, and saturation of 1,360 million cubic feet of air, in round numbers, with a medium temperature of 10° C. in the climate of Dresden, during the middle period of the year.

In the investigation of the origin of the spots of moisture, which frequently appear on the walls of buildings after they have been pronounced dry, he shows that the common notion, which, too, is given in lectures and books, is erroneous. It has always been supposed that they were caused by the action of carbonic acid upon the hydrate of lime, which still remains in the mortar. He shows, conclusively, on the contrary, that they are occasioned by the deposit of water upon the wall from the atmosphere.

Upon an accurate interpretation of these spots, depends the correct understanding of the function of mortar in respect of its conducting to the outer air a large portion of the moisture which is developed in the interior of a house. We see, then, why we need to make use of porous materials in the construction of the walls of dwellings, in order to insure dryness.

The author then considers, somewhat in detail, the subject of the changing of the air within the house, which results partly from contamination and derangement of the enclosed atmosphere, and partly from ventilation properly so termed. The consideration of the former leads to the solution of two problems, viz. : what degree of contamination can exist without detriment to comfort and health, as determined by ordinary experience, and what estimate can be made of this degree of contamination, by the excretions of the skin and lungs, into the atmosphere of a close room? The former may be determined roughly by the senses of smell, taste and sight. More definitely, it has been determined by the amount of carbonic acid gas given off by the body. In this way, then, it has been found that 1 volume of the gas in 1,000 volumes of the air within a room, denotes, on the average, a very safe proportion. The determination of the second question was accomplished in the following way : The air of a room was mixed, to a certain degree, with carbonic acid. The supply having then been stopped, the diminution in the amount of the contained gas, in definite intervals, was measured. Taking into calculation, now, the amount of carbonic acid gas contained in the external air, it was possible to estimate the amount of the outer air which was required to mix with the air of the room, in order to occasion the ascertained rate and amount of diminution in the carbonic acid contained in the air of the room, within a definite time. This method takes no account of the influence of diffusion and absorption. Experience, however, has shown that the error, resulting from the neglect of these factors, is of little moment. By this method of calculation, the author was able to show that, in a room with closed windows and doors, the ventilation undergoes great and decided variations. On the average, for a room in which the air was continually notably pure, the ventilation was found to amount to 60 cubic metres per man and hour, a large amount when we recall the fact that a man does not inhale and exhale one-half a cubic metre in an hour. This result, it will be seen, corresponds exactly with that obtained in the Hospitals at Paris, by the practical experiment of introducing gradually increased quantities of fresh air into the wards, until the limit was attained at which the air continued clear and pleasant.

Experiments, made to determine the degree of the natural ventilation of cattle stables, under various conditions, were also employed to ascertain the amount of ventilation which takes place through the walls of dwellings constructed of different materials. Max Märker calculated for a wall surface, one metre square, and a difference of temperature of 10° C., that with walls of

Sandstone, . . .	0.169 cubic metres air,
Lime or quarry stone, .	0.232 " " "
Bricks, ...	0.283 " " "
Calc-tuff, ...	0.364 " " "
(Dried) Clay brick, . .	0.512 " " "

expressed the amount of ventilation.

Märker also found that domestic animals require less ventilation than man; that the air of a stable may contain as much as three volumes in the 1,000, of carbonic acid gas, and that a cow, for example, requires a ventilation of only 30 cubic metres per hour, which is furnished, on the average, by

17.8	square metres of sandstone wall.
12.9	" " " limestone wall.
10.6	" " " brick wall.
8.2	" " " calc-tuff wall.
5.9	" " " (dried) clay brick wall.

"Since," he says, "the degree of the natural ventilation of a stable depends, not upon its cubical contents, but upon the superficial area of the ventilating surface of its walls, it follows that the ventilation in a small stable is relatively greater than in a larger one, since, for each animal in a small stable, there is a greater ventilating surface than is the case in a larger one." The application of this fact to dwelling houses is obvious.

In the third lecture, the author considers the subject of the air in its relations to the ground. As is the case with the clothing and with the walls of a house, the ground contains air, likewise in motion, though it is not perceptible to our ordinary sensations. The pores of the ground are filled either with water or air alone, or with the two together. This contained air is kept in motion, by the force of the external air, by differences of temperature, diffusion,—indeed, by everything which gives motion to gases. The permeability of the ground to air is well illustrated by the occasional cases of poisoning by illuminating gas which have occurred, even in summer, in houses situated at considerable distances from the locality where the gas escapes from the pipe. On the other hand, a reversed action occurs ; that is, the natural ventilation of houses is effected partly through the ground and not merely through the walls. Of late, we have learned that the neglect of proper means for cleanliness on the part of our neighbors may be the cause of poisoning our wells. The same causes may also defile the air within the ground, and more readily, too, as the air pervades the ground more extensively and wanders about more easily than the water. While the dangers to public health are lessened by all so-called sanitary improvements, the author advocates, as most essential of all, the increased purification of the ground and diminution of the organic processes in the ground of inhabited localities, which processes are now proved to occur.

The author gives the details of experiments made by himself in Munich, and by Dr. Reinhard in Dresden, to determine the amount of carbonic acid gas in the ground at the depth of one half and four metres. The experiments were made by the author, in a barren locality, and were continued during fourteen months. Considerable variations were found at the different depths. Except during June and July, the amount was always greater at the depth of four metres. It was greater, also, in midsummer than in winter. In Dresden, the amount found in winter, on the contrary, was twice as great as that found in Munich in summer. Further investigations of this kind are required to give a definite idea of this subject. The question at once arises as to the source of this gas. The author shows that it does not originate from sources usually assumed, and asserts that the most natural explanation is that the ground itself is the source of this gas, as it occurs both in the contained air and water, and that it is produced by the organic processes which occur in the ground.

On the Presence of Arsenic in the Air of Rooms hung with Arsenical Wall-papers. By Dr. H. Fleck, Dresden. (Abstract.) (The original paper is in the *Zeitschrift für Biologie*, viii. (1872), p. 444.)

Although the poisonous character of the arsenical greens and the danger arising from their use have long been recognized, they continue to be used to a considerable extent, and that, too, in spite of legislative enactments.

Unmistakable cases of poisoning have arisen from inhabiting rooms hung with arsenical wall-papers, when, on account of the character of the paper or for other reasons, it has been impossible to ascribe the poisonous effects to portions of the coloring matter mechanically detached. For this reason, and because in certain cases the odor of garlic had been noticed in rooms thus papered, it was long ago suspected that there was actually generated, under some circumstances, arseniuretted hydrogen, or some similar gaseous compound of arsenic.

The conclusions of previous observers have, however, possessed the character of assumptions rather than of convictions founded upon experiment. The author has undertaken to answer, by direct experiment, the question, whether and under what conditions arsenical colors on the walls of a room can generate a gaseous compound of arsenic. The coloring matter used in the experiments was Schweinfurt green, an aceto-arsenite of copper, composed of oxide of copper 31.29 per cent., arsenious acid 58·65 per cent., and acetic acid 10·06 per cent. The author finds, however, that a certain amount of free arsenious acid is always present.

A paper was prepared so that to every square centimetre of surface there should be fifteen milligrams of combined arsenious acid. Starch paste was used to fix the coloring matter upon the paper, and also to fasten the paper to the inside of a large tubulated bell-glass. The bell-glass, thus lined and while the paste was still moist, was placed upon a well-ground glass plate, the tubulure was hermetically closed, and the apparatus was left to itself for three weeks. A growth of mould appeared between the paper and the glass sides, and the air within the jar acquired a musty odor. At the expiration of the three weeks, a slow stream of air was passed through the bell-jar, and the presence of arsenic was shown conclusively in the air as it issued from the apparatus. The arsenical compound, thus present in the air, gave, with a solution of a salt of silver, the ordinary reaction of *arseniuretted hydrogen*. A similar experiment, in which was employed a flask coated on the inside with a mixture of gelatin and Schweinfurt green, gave a similar result. It was found that a mixture of arsenious acid and starch paste gave rise to the formation of arseniuretted hydrogen, but no arsenic could be detected in air which had been in contact with a mixture of arsenious acid and water without the presence of any organic material.

From these and confirmatory experiments, the author concludes that there can no longer be any doubt of the possible presence of arseniuretted hydrogen in the air of a room hung with paper which is colored with Schweinfurt green; that the evolution of this gas takes place on account of the joint action of moisture and of organic matters (especially such substances as are used in fixing the paper to the walls); and that wherever free arsenious acid is in contact with organic substances, the evolution of the gas is possible. The danger, then, is by no means confined to Schweinfurt green, but may arise from any color which contains arsenic.

Bibliographical Notices.

Insanity in its Relations to Crime. By W. A. Hammond, M.D. New York: D. Appleton & Co. 1873. 8vo. Pp. 77.

The above essay, in part, appeared in Putnam's Magazine for September, 1870, under the title, "Society *versus* Insanity." The first chapter, in its present form, gives the details of three homicides in which insanity was the defence. The cases are taken from French sources, previous to 1854, and furnish the author his "Text"; but as the "Commentary" in the second chapter, barely alludes to them, we may dismiss them as intrinsically interesting, but in a measure superfluous, since parallel cases are of frequent occurrence.

We are more concerned with the writer's ideas of medical jurisprudence, which he gives at some length, substantially as follows: Sin and crime, he remarks, are not identical; the latter is to be measured only by the injury done to society; law and justice are, also, two different things. Justice need not be enforced between society and the individual unless consistent with the great law of protection. *Salus populi suprema lex.* The greatest good of the greatest number must be promoted, at the risk of property and life to the individual. Upon this basis, insanity must be dealt with.

Delusion, which in law is evidence of insanity, is no excuse for crime, in the author's opinion, unless *if true*, it would justify the criminal act. For instance, the melancholy mother, who believes her child to be in danger of perishing with cold and starvation, and kills it out of her insane pity, is to be held responsible, under this rule, because this belief, if true, would not justify her! The instance actually given, is that of a sailor who, during a storm at sea, killed a Russian Finn, under the delusion that his death alone would save the lives of the rest of the crew, and bring the ship to land in safety. The author thinks this sailor's delusion no excuse for his crime, and that, while death is the penalty for murder, such lunatics should be made to suffer. He thinks the tendency of such punishment would be to diminish the frequency of similar delusions!

Dr. Hammond goes still further in the interests of society, and says "some of the insane are such monsters of *depravity*, that they should be slain, upon the same principle that we slay wild and ferocious beasts." He also thinks murderers from morbid imitation, should be punished. He objects to the humane opinion of Mr. Francis Wharton, an eminent legal authority, when he says, that the consciousness of the *legal* relations of crime in an insane person, does not confer responsibility, where it does not otherwise exist. He approves the opinion of Dr. Mayo, that insanity is no excuse when the person is aware of the murderous tendency of his actions, "and in being unable to resist them is *only in the same predicament* with every recognized aspirant for the gallows."

In the case of David Montgomery, an epileptic, recently tried at Rochester, N. Y., Dr. Hammond disagreed with Drs. Gray and Cook, as to his responsibility. It was proved that he was insane from recent convulsions, for several days before the homicide, but on Dr. Hammond's testimony, that he was conscious at the time, he was convicted and sentenced to be hung. Drs. Gray and Cook testified to the familiar fact, that epileptics often talk and act quite rationally for several days, being meanwhile really insane, and are afterwards entirely unconscious of what has passed. This case was pending for a year and a half, when the prisoner became so demented as to require his commitment to the asylum for insane criminals at Auburn.

Dr. Hammond thinks a knowledge of right and wrong a sufficient test of responsibility, though not of insanity, and thus, too, in the legal sense; i. e., an individual, to be responsible, need not have any *moral* sense as to the nature of his acts, nor even a knowledge that his act is against the law, for that matter, since ignorance of the law is no excuse for crime. Any person having sufficient *capacity* to know his act is contrary to law, should be punished. He may have no moral sense; he may be intellectually an idiot; if he "has sufficient intelligence to know that pointing a loaded pistol at a human being, cocking it, and pulling the trigger, are acts which will cause the death of the person against whom they are directed, he should be subjected to the same punishment for a homicide as would be awarded for a like offence committed by a sane person."

"Emotional insanity and volitional insanity, or irresistible impulse, should," he says, "be allowed, generally, as much extenuating force as 'heat of passion.'" He doubts if irresistible impulse is ever, with the insane, more than *almost* irresistible!

The views above expressed, sound strangely from an expert, whose evidence so recently procured the acquittal of McFarland. Such opinions would seem very antiquated and extra conservative, even from an attorney general pleading for a conviction. They have certainly been abandoned by several high judicial authorities, and have plenty of precedents opposed to them, in decisions here and abroad. They do not reflect the opinions of any alienist of repute, nor the average opinion of the profession at large. They can only be explained in the writer, it seems to us, upon local and personal grounds.

In behalf of the insane individual, let us suggest, that society has no right to *more than protect* itself, by taking the life of a person for a homicide for which he is morally irresponsible, when confinement in a suitable hospital would answer the same end. Neither has law the right to *punish* an insane criminal in *prison*, as a convenient substitute for hanging, nor to *libel* him and disgrace his family by the imputation of crime. T. W. F.

Boston Medical and Surgical Journal.

Boston: Thursday, August 14, 1873.

A CORRESPONDENT finds much to complain of in our late editorial on the suppression of quackery. We publish his letter, though neither its matter nor its tone is much in its favor, because by exposing some of its fallacies we can strengthen our case.

The writer tells us that "the maxim 'a little learning is a dangerous thing' is false in theory and practice, gotten up for tyrants and aristocrats," &c., in the true "Elijah Pogram" vein, and hints that our sentiments are not truly loyal. As the best medical schools are undoubtedly in Europe, we do not see the force of this tirade. In the matter of expert testimony, we might learn much from some of the "effete despotisms of the old world," which would never tolerate such evidence as here disgraces almost every important criminal trial. We admit freely that we hope to see the profession a "ring," but one which every man of education and character can enter, and if it be aristocratic to decline the fellowship of others, we admit that charge too.

Further on, we are told that it is possible for non-professional people "to judge what *system* they should use and what practice they should adopt." We regret very much that it should be necessary to inform our correspondent that there are no "*systems*" in regular medicine. The fact that very many decently educated people believe in homœopathy is proof conclusive that they are *not* able to judge. The indignant denial that the "motto of the most pestilent class of quacks is public instruction," does not strike us as materially altering the fact.

It appears to us that the offence of our article consists in maintaining that the opinion of a man of education is better than that of one without, and we imagine that our correspondent holds that if the former decline to treat the crude theories of the latter with respect, he is an aristocrat who ought to be suppressed. We, too, "have no sympathy with the sentiment you must be *first*, *eminent* and *distinguished* in any branch and every calling" in which "you engage," but we believe that every one of fair ability is able to master *one* profession or calling, and that in others he should ask the opinion of those fitted by education to give one. With regard to the gloomy forebodings of our correspondent, we refer him to the Journal of July 24th, which shows what progress the profession has already made in the suppression of quackery.

One would think that the experience of Boston, last winter, would be sufficient to serve as an example, at least to our own immediate neighborhood. But no. The town of Holyoke is submitting itself to the scourge of smallpox quite after the manner of good old times. The disease has been raging all summer, and no steps have been taken as yet to suppress it. The more we hear of the doings of "local authorities," the more we regret that our present system of government permits matters of such hygienic importance, involving the health, not of one but of many communities, to be left in the hands of the ignorant and inefficient.

Glycogen and Glycogeny.—The *Medical Times and Gazette*, June 21, 1873, in an article on this subject, concludes as follows:—

"Glycogen is formed in the liver; as it is converted into sugar, it is carried away into the circulation. Glycogen is no deposit in the liver, but really formed there; it may be formed from animal or vegetable food, but its formation is greatly stimulated by the use of sugar as an article of diet. Normally, sugar or glycogen is hardly to be found in the system, save sometimes after meals, when sugar may be detected. The process of destruction is not known, but when it is arrested, or the rate of glycogeny is excessive, we have, first, a saccharine condition of the blood, then of the urine, and so the disease called diabetes."

Correspondence.

HILLSBORO', ILL., July 26, 1873.

MESSRS. EDITORS,—In your issue of the 17th ult., I find an editorial on the "Suppression of Quackery," from which I beg leave to dissent.

It admits it to be one of the most "urgent" and "difficult questions" of solution, and "*rests* with the medical profession." So far we agree. "If the *law* forbade, as it should, ... but this is too much to hope for, for a long time at least." Can we expect the *law* to come to our rescue until the people are enlightened enough to see the necessity of the law? No; public sentiment must be made, and can only be made healthy and efficient *through* us by giving them sufficient light to see the darkness. The maxim, "a little learning is a dangerous thing," is false in theory and practice, gotten up for tyrants and aristocrats, and has done more harm than good; a little learning on any subject is better than ignorance, and we have no business to quote it to fortify a ring, clique or sect, and barricade light and knowledge. The article opposes the position of the *Canada Lancet* "for instructing the people in medical matters," and gently slurs "popular science as a hobby"; the more such *hobbies* the better. Is it a fact of small moment, that, during the last three decades, the Astor Library Reports show that, in place of one in fifty works of science being drawn as at *first*, the last year the number on science exceeded the number on literature and fiction? I have no sympathy with the sentiment, you must be *first*, *eminent* and *distinguished* in any branch and every calling you engage. It neither comports with the means and facilities we enjoy, nor is it compatible with the genius of our republican institutions; the contrary and better opinion prevails, the *general* dissemination of knowledge. The old world has given us lessons enough on *exclusive* and *infallible* habiliments. I am opposed to the *ring* system in politics or medicine; these cliques, sects and class monopolies are the bane of the country, the great barrier of progress.

Will you allow me to say this animus is not altogether concealed in the article referred to? It crops out when speaking of the "*exhibition* certain New York professors made of themselves at Steinway Hall." Are New York professors a whit behind Boston professors? Not a bit of it; and no such insinuations will disturb or injure them. Again, it says:—"Non-professional people are not able to judge of medical subjects, and it is not possible they should become so"; but it is possible they should become so sufficiently to judge what *system* they should use or what practice they should adopt! Again:—"Nothing that is worth knowing can be mastered without severe study"—an element of truth, but largely false, for everyone knows many things worth knowing that never required much study to master. I deny that "the motto of the most pestilent quacks is *public instruction*." Neither the public nor intelligent physicians recognize any such assumption, and if true of Boston, it is not of the West; and when books are spoken of "for the young," "the married" and "the unmarried," you but recognize a public want; the barrenness of ignorance, which fails to satisfy the soul—the conviction that we know too little of the laws of health and being—speak out in the purchase of just such trash. Why have not men of science and ability given the people the right kind of medical pabulum, instead of starving them with these *husks*, which the swine feed on?

The *profession* alone are guilty if the people are being educated in the wrong direction. It is *our* duty to *shape* public sentiment, not stand aloof, and, with a vast sense of our "dignity," say to the multitude, *you are not worthy of our teaching*, follow your blind leaders and go into the ditch together.

And now a word or two in regard to "raising the standard of medical education," with which the article closes, and which is proposed as the *only* way out of trouble, the *right* way to suppress *quackery*, rather than "instructing the people in medical matters."

We are in favor of raising the *standard;* this ought we to do and not to leave the other undone. Make "the degree something one may be proud to have earned," but do not forget the law of *supply* and *demand.* Streams seldom rise higher than the fountain. If "*like people like priest*" is anywise tenable, much more "*like people like doctor.*" The highest culture, the noblest endowments and the most thorough scientific training, we all accept, admire and applaud, but often the *degree* of which we are *proud* only shows that at *some* time the stream *once* rose that high, but now we look in vain for water, or even moisture, within its banks. If we wait until the "dignity of the profession will be recognized" by its high attainments, "sharply" defining the line between us and the irregulars, we shall wait a long time past the millenium. We shall not only be "laughed at and sneered at as bigots," as the writer's just apprehensions intimate, but, as venerable fossils, may reach eminence in some antiquarian depository, or in some museum as a medical deformity of the nineteenth century. Honest and sincere doubtless the writer is, but to my mind he seems to take an impracticable view, altogether Utopian. When we put ourselves out of sympathy with those who need our services by such stilted and visionary motives as run through this article, we are just outside of any possibility of accomplishing the end proposed. Respectfully yours, THOS. D. WASHBURN.

MESSRS. EDITORS,—These life insurance companies, of whom some one wrote in the JOURNAL of the 17th of July, or rather their agents, are among the nuisances which afflict us country doctors. They are generally adventurers of about the same stamp as lottery ticket venders; second-hand clergymen, whose congregations are to be congratulated upon their loss; and men of about the same stamp. I asked one of these fellows what would be the result if I declined furnishing the information, and received for answer, that my patient could not have his policy. In our town, we have found out a trick which rather disturbs them. We say:—"You can have the information you want for five dollars, provided you bring written permission from X. to give you the information." That did very well for a time; but then they adopted the plan of sending the applicant for insurance with the blank to be filled. This caused a change in tactics, and now we say, "tell the agent that we charge five dollars for filling up. If he does not choose to pay it, we know another and quite as good or better company, who will pay us for the certificate, and we can get you into that." The result has been to get rid of the agents.

But this life insurance business is, I fear, coming to an untimely end. Not that I care one fig for the companies, but feel very sorry for the insured. The companies pay out so much to agencies that many of them have got to fail, sooner or later. It has been the history on the other side of the water, and will be on this. A few men, officers, have made money, grown wealthy, but it has been by humbugging the insured. They have taken risks which they had no right to take. They have allowed agents to operate who do not fill out the answers of applicants fairly. They often employ men as examiners upon whom reputable physicians would look with absolute contempt. When in Boston, last spring, I saw a number of names of such in your directory, concerning whom I inquired. It is the same in country towns. I have known one who could not hear conversation five feet from him, make out a certificate of auscultatory signs. It was doubtless true that he heard no souffles and no râles.

There are two of your Massachusetts companies to whom the preceding statements will not apply, and I always send my patients to them, if they desire to be insured. One of these is the New England, the other the State Mutual at Worcester. I speak of these, because they both rejected me as an applicant for a policy, upon my own answers, although I had a clean bill, and a recommendation from their examining physician. This was more than twenty-five years ago, and I am still LIVING.

Oldtown, Vt., July 20, 1873.

Medical Miscellany.

GLYCEROLE FOR CHAPPING OF THE SKIN.—℞. Oxide of zinc, gr. xx.; tannic acid, gr. xv.; glycerine, ʒiv.; tincture of benzoin, ʒss.; camphor, gr. xv. M.

WE understand that Dr. Abraham Jacobi and Dr. Mary C. Putnam, of New York, are soon to be united in the bonds of matrimony. Such an alliance cannot be otherwise than extremely interesting in its bearing upon the female physician question. The experiment has been tried in London, as our readers may remember, and, we believe, with great success—professionally.

THE new and elegant hall of the New Hampshire Medical College has lately been completed, at a cost of ten thousand dollars. The cases are of black walnut, and the ceiling has been handsomely frescoed. This has been done partly by the liberality of a New York gentleman, Mr. Stoughton, and partly by an appropriation by the legislature. This improvement must have been a welcome one, for since the erection of the building in 1809, at a cost of $4,500, nothing has been done except what the Faculty have been able to accomplish with their private labor and purses.

WE are glad to hear that the young lady, upon whom Dr. Robert Battey, of Rome, Georgia, performed the extraordinary operation called normal ovariotomy, a year ago, has not only survived, but is in most excellent health. Her former pains have entirely ceased. Curiously enough, she had a flow from the womb, resembling the menstrual flux, every two to four weeks, up to a few weeks ago, since when she has seen nothing of it.

IT is proposed to close the subscription in America for the monument to Von Gräfe, on the 1st of September. Any sums received previous to that time will be sent to Berlin at once by the Committee. They may be forwarded to Dr. Henry W. Williams, 15 Arlington St., Boston.

THE MEDICAL RECORD blames the profession for the extensive use of drugs by the public on their own responsibility. This growing evil seems to us to be due rather to the abominable system which floods the country with patent medicines. The directions accompanying these concoctions indeed, saves the doctor's fee, but imparts much false information to the purchaser. We are at a loss to see why a paternal government should not only countenance but protect such abuses. The profession are, undoubtedly, responsible, however, for the great popularity of preparations now furnished so extensively by manufacturing chemists. Though many of these medicines are reliable and convenient, we venture to predict, as well as to express the hope, that their reputation will be short-lived. Why do we have *officinal* drugs?

BOGUS DEGREES.—Philadelphia no longer enjoys this monopoly. The following is from the advertising columns of the Kladderadatsch.

"Doctor in Absentia der Philosophie, Medicin, Chemie, und Zahn-heilkunde wird mit Discretion vermittelt. Adresse Medicus, 46 Königstrasse, Jersey," which means that any one may be made a Doctor of Medicine, Chemistry or Dentistry, by applying to "Medicus." The Lancet rightly says, the more publicity we can give to such advertisements, the less likelihood of their entrapping the unwary.

THE following is from Dr. Parvin's address before the Medical Editors' Association:—

As Robert Southey well says in "The Doctor":—"Man is a dupable animal. Quacks in medicine, quacks in religion, quacks in politics know this, and act upon the knowledge. There is scarcely any one who may not, like a trout, be taken by tickling." A church dignitary once said, "*Populus vult decipi; et decipietur.*"

NOTES AND QUERIES.

Prescription Papers.—Among the absurdities, expensive absurdities of the day, is the furnishing of prescription papers to physicians by retail druggists. We are constantly receiving packages of these, sometimes in a bundle of a hundred or more, and occasionally with a very nice, fanciful pocket-book. One of these cases or pocket-books, which came under our notice a few days ago, was of Russia leather, very handsomely got up, and with a physician's name in gilded letters upon the cover. We took occasion to ask a druggist, some time ago, why he wasted his money in having physicians' names, &c., printed on these papers, together with his own? The answer was, "because doctors come in and ask for them. If we don't do it, they send their prescriptions to some one who will." We overheard a so-called *doctor* asking for something of the kind, and objecting to the last lot he had received, on account of their *getting up*.

In this matter of prescribing there are, it seems to us, one or two things to look after. In the first place, be sure that the prescription is properly written. Secondly, be sure that it is put up by a reliable druggist. This latter proposition may well be divided up. The patient has selected you, my friend, to treat his case. He had a perfect right to select you, had he not? He has always been in the habit of employing a certain apothecary. He had the right to do that, had he not? How you would growl if his apothecary should advise him to call in another medical adviser. Under certain circumstances, however, he might have the right to do so. Under certain circumstances you have the right, also, to ask him to change his apothecary. If you know that A is not competent to do his work, tell your patient to go to B. If you know that C is in the habit of buying an inferior class of drugs, send to D, whom you know to be more reliable. If you know that E has a particular article which your patient needs, and you are doubtful if any one else has it, why not send for it to E? But in the name of Galen, don't sell your patronage for a couple of quires of prescription papers, with your name and residence printed upon them.

It is a good plan to ask the patient whom he is in the habit of dealing with. If the druggist is reliable, that is enough. If you know the contrary, or if you have a doubt, suggest another, but be sure the doubt is not based upon a fancy monogram, got up to bait you with. Be sure not to let your doubt be based upon your ignorance of the difference or similarity between Glauber's salt and sulphate of soda, Indian root and ipecac.

Quire.

Erratum.—In the Journal for July 31, 1873, p. 113, 17th line, for "except that of Drs. Rockwell and Beard," read *especially that of*, &c.

Married,—At Frankfort-on-the-Main, 21st ult., Horatio R. Storer, M.D., to Caroline Gilmore, both of this city.

Mortality in Massachusetts.—*Deaths in eighteen Cities and Towns for the week ending August* 2, 1873.

Boston, 205—Charlestown, 14—Worcester, 27—Lowell, 53—Milford, 9—Chelsea, 7—Cambridge, 32—Salem, 21—Lawrence, 19—Springfield, 20—Lynn, 19—Gloucester, 6—Fitchburg, 8—Newburyport, 8—Somerville, 15—Fall River, 35—Haverhill, 5—Holyoke, 16. Total, 519.

Prevalent Diseases.—Cholera infantum, 180—consumption, 35—dysentery and diarrhœa, 24—scarlet fever, 15—typhoid fever, 15—cholera morbus, 12.

Holyoke reports six deaths from smallpox.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, August 9th, 223. Males, 122; females, 101. Accident, 5—abscess, 1—apoplexy, 3—inflammation of the bowels, 6—disease of the bladder, 1—disease of the bowels, 1—bronchitis, 2—inflammation of the brain, 5—congestion of the brain, 1—disease of the brain, 3—cancer, 5—cerebro-spinal meningitis, 4—cholera infantum, 84—cholera morbus, 6—consumption, 21—convulsions, 5—debility, 1—diarrhœa, 6—disease of the ankle, 2—dropsy of the brain, 1—dysentery, 5—delirium tremens, 1—scarlet fever, 8—typhoid fever, 3—gastritis, 3—disease of the heart, 4—hæmorrhage, 1—disease of the kidneys, 2—disease of the liver, 1—congestion of the lungs, 2—inflammation of the lungs, 3—marasmus, 9—measles, 1—old age, 5—paralysis, 2—pleurisy, 1—premature birth, 1—peritonitis, 1—sunstroke, 3—teething, 1—tumor of the abdomen, 1—unknown, 2.

Under 5 years of age, 132—between 5 and 20 years, 13—between 20 and 40 years. 32—between 40 and 60 years, 30—over 60 years, 16. Born in the United States, 170—Ireland, 34—other places, 19.

THE

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Original Communications.

CHILDREN'S DISEASES IN MASSACHUSETTS.

By J. O. Webster, M.D. Harv.

[Concluded from p. 155.]

EPIDEMIC INFLUENCES AND INFECTION.

Over 20 per cent. of our infant mortality is caused by epidemic and infectious diseases. This mortality is largely preventible. When people learn to guard as carefully against the spread of scarlatina, measles and whooping cough as they do against that of smallpox, perhaps ten per cent. of our infant mortality may be done away with. The epidemic diseases we are less able to guard against; but, with greater attention to hygiene, no doubt much of their fatality might be avoided.

The remainder of this essay will be devoted to a consideration of the most fatal diseases of children in Massachusetts.

Average Annual Mortality under five from certain Diseases, and Percentage of each, in Massachusetts, for six Years, 1865–70.

Diseases.	No.	Percent.
All diseases	8,944	100
Atrophy and debility	152	1.71
Brain, disease of	119	1.33
Bronchitis	131	1.47
Cephalitis	321	3.58
Cholera infantum	1,349	15.09
Consumption	292	3.26
Convulsions	449	5.03
Croup	392	4.38
Diarrhœa	190	2.13
Diphtheria	193	2.15
Dysentery	443	4.96
Enteritis	83	.92
Fever, typhoid	114	1.28
Hydrocephalus	345	3.85
Infantile, premature, &c.	1,033	11.56
Measles	164	1.83
Noma (canker)	112	1.25
Pneumonia	616	6.88
Scarlatina	596	6.66
Scrofula	57	.63
Smallpox	49	.56
Tabes mesenterica	210	2.35
Teething	267	2 98
Whooping cough	293	3.27
All other diseases	974	10.89

In taking a comprehensive view of the field before us, we find diseases affecting the digestive system preponderating, they being the occasion of nearly one-fourth (23 per cent.) of the mortality under five years. Diseases of the respiratory system, including whooping cough, cause about one-fifth; developmental diseases one-sixth; while to typhoid and the eruptive fevers, to tubercular diseases, and to affections of the nervous system, are each attributed one-tenth.

Although our infant mortality is no greater than that of other countries, it is differently divided among the diseases, bowel affections being much more common here than abroad, and nervous diseases holding there a much more important place than here. Pulmonary diseases, also, cause over double the infant mortality in England that they do in Massachusetts.

Number of Deaths under five from certain Diseases, or classes of Disease, to 100,000 Births.

Diseases or Classes.	Massachusetts, 1865–70	England.[*]
Zymotic diseases	11,118	9,112
Convulsions	1,282	4,631
Cephalitis and hydrocephalus	1,903	3,242
Bronchitis, pleurisy and pneumonia	2,140	5,348
Tubercular consumption	834	1,887
Mesenteric disease	600	439
Teething	763	1,554
Gastritis and enteritis	283	863

We shall first consider the chief diseases of the digestive system:—cholera infantum, diarrhœa, dysentery and enteritis.

CHOLERA INFANTUM.

To cholera infantum is attributed 15 per cent. of our infant mortality, more than twice the proportion that is assigned to any other disease. It has steadily increased in its death-rate, and in 1870 caused 7·1 per cent. of the general mortality, being exceeded only by consumption, while its average for the past twenty-nine years was only 3·7 per cent.[†] In Boston, in 1870, it caused 22·18 per cent. of the deaths under five, and 9·38 per cent. of the general mortality.[‡] In Philadelphia, for seven years, 1862 to 1868, it occasioned 6·4 per cent. of all deaths.

It is very obvious to any one who has a clear appreciation of what cholera infantum is, that a large proportion of these were not cases of the true choleraic disease. The common habit of calling cases of summer diarrhœa of children, especially fatal ones, cholera infantum, impairs the value of all our statistics in regard to this class of diseases. The name should be restricted to those cases that present the true choleraic symptoms, almost identical with those of Asiatic cholera. We meet with such occasionally during every summer, either attacking a previously healthy child or supervening upon an already existing diarrhœa, and usually proving fatal within forty-eight hours.

Cholera infantum is considered an American disease, and is not recognized by English and Continental writers. It would appear from their descriptions, however, that certain of their cases of enteric disease present the characteristic symptoms of this affection.

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[*] McCulloch. Statistical Account of the British Empire, 4th Ed., p. 622.
[†] Registration Report, 1870, p. 63.
[‡] Report of State Board of Health, 1871.

It is well known to be a disease of hot weather, nearly all of its mortality occurring in the months of July, August and September, and a sudden rise of temperature invariably increasing its prevalence and fatality.

Its increasing mortality is sufficient evidence that we have not made much advance in its treatment. It is probable that our labors will be most profitably expended in the direction of prevention; but in this direction we can do little, so long as the class of people among whom the disease most prevails is the class least easy to reach by our teachings or influence. So long as, whether in city or country, the simplest hygienic laws in regard to feeding and clothing babies, to cleanliness, ventilation and drainage, are habitually violated, so long will cholera infantum continue to be the scourge that it now is.

Of the other intestinal diseases, the per centage of infant mortality is about as follows:—Diarrhœa 2, dysentery 5 and enteritis 1. If a more correct report could be had, there is no doubt that enteritis would stand far ahead of the other diseases of this group, and that to it would be charged a large proportion of the deaths now attributed to cholera infantum.

The mortality from dysentery has been steadily decreasing for some years. Its infant mortality in 1865 was 833; in 1870, only 273. The epidemic of 1865 appeared to leave an influence that has gradually subsided, and now all cases can be considered sporadic. Dr. Derby predicts, from the experience of previous years, an increased death-rate from dysentery before many summers shall have passed.*

Next in the order of fatality, in infants, come *diseases of the respiratory organs.*

Bronchitis is charged with but 1½ per cent. of the mortality under five, croup 4⅓, diphtheria 2, pneumonia nearly 7, whooping cough 3¼.

BRONCHITIS AND PNEUMONIA.

Here, as in the last class, we have to lament the incorrectness of the returns. Since the discovery that what was formerly known as lobular pneumonia was really bronchitis, with collapse of lobules, careful observers have found that bronchitis is, in this way, the cause of death in a much larger proportion of infantile cases than was formerly supposed, while the mortality from pneumonia is correspondingly lessened. From the statistics before us, however, we are forced to the conclusion that this advance is practically ignored, to a great extent, in Massachusetts, else we should not expect to find pneumonia charged with nearly five times as much infant mortality as bronchitis.

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* Registration Report, 1870, p. 62.

Bronchitis and pneumonia, together, cause 8.35 per cent. of infant and 7.40 of general mortality.

Percentage of the Deaths from Croup and Diphtheria to the General Mortality, in Massachusetts.

Period.	Croup.	Diphtheria.
16 years 8 months, to Dec. 31, 1857	2.37	—
1858	2.36	.09
1859	2.48	.14
1860	2.46	1.10
Five years, 1861 to 1865	2.36	3.54
" " 1866 to 1870	1.74	1.19

DIPHTHERIA.

Diphtheria has not prevailed epidemically of late years, and its total mortality decreased from 672 in 1865 to 242 in 1870. Over half of the deaths from diphtheria occur under five.

Diphtheria seems to have been unrecognized in Massachusetts until 1858, when we find .09 per cent. of the total mortality attributed to it. In the previous year, it had begun to prevail epidemically in England and in the extreme western part of our country. The mortality steadily increased until 1863, when it caused 5.08 per cent. of all deaths; it then diminished, and in 1870 caused only .88 per cent. In the past, the epidemics of diphtheria have been separated by wide intervals of time; hence we have reason to hope that another will not be experienced for some generations.

CROUP.

Croup does not cause so large a proportion of our mortality as formerly; a fact attributable partly, no doubt, to more rational methods of treatment, but partly, also, to the fact that a portion of the cases formerly reported as croup would now be recognized as diphtheria. For the twenty-four years and eight months ending Dec. 31st, 1865, the per cent. of deaths from croup was 2.36; for the five years, 1866–70, only 1.74. For the year 1870, the proportion of mortality from croup and diphtheria was but a trifle above the former average of that from croup alone. These considerations show, I think, that diphtheria occurred sporadically before 1858, but was not recognized as a distinct form of croup until it began to prevail epidemically. No doubt, the distinction will be some time lost again, as it has been repeatedly in the past.

Whooping cough causes 3¼ per cent. of our infant mortality, and is as much an *opprobrium medicorum* as ever. Despite the multitude of specifics that have been discovered for it, its proportionate mortality is the same that it has been for thirty years.

DEVELOPMENTAL DISEASES.

Next in the order we have chosen, come the so-called "developmental diseases," causing over 16 per cent. of the deaths under five, of which there are attributed to infantile and premature 11½, atrophy and debility 1¾, and to teething about 3 per cent.

Of the "infantile and premature," about two-thirds belong to the former and one-third to the latter, as nearly as we can judge from the three years in which they have been reported separately. Admitting the correctness of this estimate, we have 8 per cent. of the deaths under five occurring from the causes that are grouped together as "infantile." As it is probable that these deaths occur mostly in the first year of life, they would furnish about 15 per cent. of the mortality in that year.

The deaths reported by this name we apprehend to be occasioned largely by inherited weakness of constitution; the children, born without sufficient vital force to carry on the processes of life, succumb sooner or later, without presenting the evidence of any disease to which their demise can be attributed. The burden of life is too heavy for them, and they are forced to let it fall.

Others of these deaths are occasioned by sheer neglect, sometimes intentional, but oftenest from ignorance of how little exposure a young infant will bear, or from necessity, which compels many mothers, of the poorest class, to leave their babies alone, or with other children, while they go out to earn their livelihood.

Atrophy and debility apparently caused only 1¾ per cent. of the mortality under five for the years 1865–70. In 1870, there were reported 217 deaths from these causes, or a little over 2 per cent. In Boston, in 1870, there were 150 deaths under five from "marasmus," or 6.4 per cent. Dr. Eustace Smith says that simple atrophy, in England, is "the commonest form of disease and the most frequent cause of death in infants."* This does not seem to be the case in Massachusetts, for the reason, probably, that while two of the causes given by Dr. Smith, poor quality and deficient quantity of breast milk, are equally operative here, his other cause, improper artificial feeding, is more apt with us to give rise to enteric disease.

Of *teething* we have already spoken, while treating of the causes of infant mortality.

TYPHOID AND THE ERUPTIVE FEVERS.

The fevers constitute the next class of diseases in our division, causing, as we have have said, one-tenth of our infant mortality, divided as follows:—typhus, including typhoid and infantile fevers, 1¼, measles 1⅚, scarlatina 6⅔, and smallpox 0½ per cent.

Scarlatina stands third in the order of mortality of children's diseases (not reckoning "infantile" as properly *a disease*), cholera infantum and pneumonia alone being more fatal. Two-thirds of the deaths from scarlatina occur under five, and one-fourth between five and ten. It is not so eminently a disease of infancy as measles, of which four-fifths of the mortality occurs under five.

The *apparent* is much less than the *real* mortality from *measles*, as this disease is more apt than any other to be followed by sequelæ, the most important of which are tubercular and brain diseases. It often, too, leaves the system debilitated and badly able to withstand the attack of any acute disease that may ensue.

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* Wasting Diseases of Children, 1st Amer. Ed., p. 26.

The diseases of this class are, to a great extent, preventible, and the ten per cent. of infant mortality that they cause is, in a certain sense, unnecessary. If the contagion of scarlatina were as much dreaded as that of smallpox, which only caused one-eighth as many deaths in the thirty years of registration, if as great pains were taken to avoid the disease and as thorough disinfection were practised after it, much of the mortality might be prevented. The same is true of measles.

Smallpox causes as large a proportion of the deaths in infancy as in later years. This would not be so if vaccination were not criminally neglected. If performed successfully at an early age, it would afford perfect protection for more than the five years that we are considering.

The death-rate from *typhoid fever* in infancy is only one-fourth as great as for all ages. Its causes are doubtless the same as in adults, and it is one of the diseases that we should confidently expect to diminish under a more devout worship of Hygeia.

TUBERCULAR DISEASES.

We next come to the consideration of tubercular diseases, the occasion of ten per cent. of our infant mortality, consumption being charged with 3¼, hydrocephalus 3⅚, scrofula 0⅝, and tabes mesenterica 2⅓ per cent.

Although these diseases are grouped together for convenience, strictly speaking, there is probably nothing tubercular about the last two, scrofula and tabes mesenterica, the cheesy deposit found in those diseases being simply the product of a low form of inflammation. These, with hip-joint disease, have too long been considered to depend upon a certain scrofulous diathesis; but such opinions are rapidly fading before recent advances in pathology, and we are coming to see that there is no scrofulous diathesis, analogous to the tubercular, but that "scrofulous" children are simply those with feeble vitality, whence they become, from various exciting causes, obnoxious to these low forms of inflammation.

Consumption, it will be seen, is comparatively infrequent before the age of five years, causing only 3¼ per cent. of the deaths, while it occasions 20 per cent. of the general mortality. For the eight years, 1863–70, 6.22 per cent. of the deaths from consumption occurred under five, while only 3 per cent. occurred between five and fifteen; suggesting, we think, that most of those who inherit the disease succumb before the age of five years, while those with only a tendency to it, needing an exciting cause for its development, are comparatively safe until puberty.

Hydrocephalus, which means principally, as used in our Registration

Reports, tubercular meningitis, occasions 3.85 per cent. of the infant mortality. About 90 per cent. of all the deaths from hydrocephalus occur under five, and two-thirds of the remainder between five and ten years. Its proportionate mortality is less than formerly, being only three-fourths as great for the five years, 1866–70, as for the twenty-five years preceding.

Tubercular meningitis will be seen, from our statistics, to be a more important disease than is generally realized, causing one in twenty-six of the deaths under five, having a considerably greater infant mortality than consumption. This is to be expected in a community where tuberculosis is so prevalent as here, since it is almost invariably the case that children with this disease are the offspring of tuberculous parents.

Tabes mesenterica causes 2.35 per cent. of the deaths under five, over 80 per cent. of its mortality occurring under that age. Its proportionate mortality has been greater during the last ten years than formerly. As already said, there is probably nothing tubercular about the disease, the deposits in the mesenteric glands being the simple product of inflammation of a low grade, excited by a previous enteritis. Vogel holds strongly to this opinion, and Meigs and Pepper endorse it as highly probable.

NERVOUS DISEASES.

Diseases of the nervous system occasion one-tenth of our infant mortality, of which there is attributed to disease of the brain 1⅓, cephalitis 3½, and convulsions 5 per cent. This class of diseases has a much smaller proportionate mortality here than in England, where diseases of the nervous system, including hydrocephalus, occasion one-fourth of the deaths under five years. In Massachusetts, their percentage is less than 14.

Cephalitis causes 3½ per cent. of our infant mortality. Of all deaths from this disease, 54 per cent. occur under five.

Judging from our Registration Reports, simple inflammation of the brain must be more prevalent in Massachusetts than in foreign countries, or, so far as I can ascertain, in other portions of our own. Dr. West speaks of its "extreme rarity," and seven cases constitute the whole of his experience in this formidable disease.* Tanner says, "simple encephalitis is a very rare disease during childhood, while acute hydrocephalus is very common."† Vogel states that it is much rarer than the tubercular form, and is no more common in children than in adults. The testimony of all the French writers is to the same effect. Meigs and Pepper state that "its frequency is much less than that of tubercular meningitis."‡

In Massachusetts, we find that the average annual mortality, under five, of cephalitis, is 321, against 345 for hydrocephalus, and their respective percentages 3.58 and 3.85; showing but little difference in their prevalence, especially when we consider that the former is not so absolutely fatal as the latter disease.

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* Diseases of Infancy and Childhood, 4th Amer. Ed., p. 103.

† Diseases of Children, 2d Amer. Ed., p. 305.

‡ Diseases of Infancy, p. 464.

We think the correctness of these statistics will be confirmed by the experience of all practitioners in Massachusetts.

In common with nearly all nervous diseases, the proportionate mortality of cephalitis has increased, being much greater for the last few years than previously.

Convulsions cause an annual average of 449 deaths under five, or 5 per cent. of our infant mortality; 90 per cent. of all the deaths from this cause occurring under five.

Our proportionate mortality from convulsions is small as compared with that of London, where, according to Dr. West, they cause thirteen per cent. of the deaths under five years.* Meigs and Pepper state that, in Philadelphia, for the five years 1844–8, the deaths under fifteen from convulsions were in excess of those from cholera infantum or pneumonia and several other diseases that they mention. In Massachusetts, three times as many deaths under fifteen occur from cholera infantum and one and one-half times as many from pneumonia as from convulsions.

The relative mortality of this affection has not increased of late.

NOMA (OR CANKER).

Noma is a disease that we have not found it convenient to class with any others. To it is assigned 1¼ per cent. of our infant mortality, or 112 deaths a year.

It is impossible that more than an insignificant proportion of these deaths can be caused by true noma. I doubt not that the experience of every one will bear me out in this statement. Undoubtedly most of these were cases of enteric disease or of simple atrophy, in which aphthous stomatitis, so commonly called canker, was a prominent symptom. So long as statements of the cause of death are taken from the friends, and physicians are so rarely called upon for certificates, our mortality reports will never possess the value they might have.

The diseases thus far considered occasion 89 per cent. of our infant mortality, leaving 11 per cent. still to be accounted for. About one-tenth of this is attributed to violent deaths and injuries of various kinds, quite a large proportion is unknown, while the remainder is divided among a great many diseases, all of minor importance.

Having taken this rapid survey of our field, the points that strike us most forcibly are, briefly, these:—

1st. That our infant mortality is no greater than that of other countries.

2d. That its causes are the same as elsewhere; but

3d. That, from difference of population and climate, or some unknown reason, some causes are less operative and others more so than in other communities.

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* Op. cit., p. 42.

4th. That zymotic diseases are more common, and constitutional and inflammatory less so, than abroad; hence

5th. That sanitary reform, as a means of reducing our infant, as well as general mortality, demands our earnest attention, and promises a more abundant reward for our labors than it would in some other localities.

In taking leave of this subject, it is with the feeling that it has been but inadequately treated, and that the chief value of our remarks will be to suggest how broad a field for study lies in the direction we have been pursuing.

Lynn, Mass., June, 1873.

ELASTIC RUBBER BANDS IN THE TREATMENT OF FRACTURES.—Dr. J. W. Southworth *(Buffalo Med. and Surg. Jour.*, May, 1873,) advocates the use of elastic retention straps, in place of the ordinary retention bands or bandages, in the treatment of fractures.

These elastic straps are most promptly improvised by taking the common rubber bands (from one-quarter to one-half an inch in width, by two inches in length), such as are sold by stationers, doubling them, and passing strips of strong muslin or factory cloth through the doubled band, so as to make it a part of the strap; thus allowing it to be stretched to the extent deemed advisable to produce the requisite degree of constricting force when applied around the splints.

In fractures of the fore-arm treated with two lateral splints, four small straps usually suffice, while in fractures of the leg or thigh more are required. Where two parallel lateral splints are used, as in fractures of the fore-arm, the rubber portion of the encircling straps must be placed between the opposing splints alternately on the superior and inferior borders, so as to counterpoise or preserve the balance of the constricting forces ; and in case of the arm, leg or thigh where more splints are necessary, the rubber part of the straps should be likewise adapted to the interspaces of the splints, in order to attain the same object as nearly as possible. By these means a sufficient amount of retentive force is *constantly* in operation, and if much swelling takes place, there will be a conservative yielding of the encircling bands, and when the swelling subsides, no matter how rapidly, there is always a coincident as well as a commensurate adaptation to the diminished size of the limb. As an after-dressing, when osseous union has taken place, and nothing but a precautionary use of splints is required, the use of these elastic bands around either sole-leather, paste board or felt splints is particularly appropriate. In order to fix the splints quite immovably on the skin, a strap of adhesive plaster, two inches wide and as long as the splint, should be applied along the middle of the splint, with the non-adhering surface against its inner surface, applying a short strip, one inch wide, at the middle and at each end, so as to secure it in position. This affords an adhesive surface which will cause the splints to remain in situation most admirably after they have once been applied.

Progress in Medicine.

REPORT ON OBSTETRICS AND DISEASES OF WOMEN.*

By W. L. Richardson, M.D.

Obstetrics.

Der Wännliche und Meibliche Körper im Sagittallschnitte, und Die Lage des Uterus und Fötus am Ende der Schwangerschaft. Von Prof. Wilhelm Braune. Leipzig. 1872.

This extract from Prof. Braune's atlas of topographical anatomy contains the account of some very important investigations recently made as to the true position of the uterus and its contents at the end of pregnancy. The experiments were made on two fresh bodies, the first being that of a female who had died in the last months of pregnancy, and the second was that of a patient in whom labor had already begun. The plates represent vertical sections which were obtained by cutting through the bodies which had first been completely frozen. The result is that all the various organs are seen absolutely *in situ.* The drawings are made with great care, and the measurements obtained by Prof. Braune differ essentially from those previously reported by other observers.

The following is a brief summary of the results reported :—

The uterus of advanced pregnancy does not have any regular relation to the skeleton, but is soft and changeable in form, its outline yielding to the elevations and depressions of the bony parts of the skeleton and the neighboring viscera. When the patient is in the horizontal dorsal position, the uterus rests for support upon the vertebral column, its longitudinal diameter being consequently lengthened. Moreover, especially in multiparæ whose abdominal walls are more or less lax, the uterus often lies obliquely across the vertebral column, having apparently fallen over the convex angle of the lumbar vertebræ. When, on the other hand, the patient stands up, the uterus falls forward so as to rest on the anterior wall of the abdomen, as a result of which the circumference of the body is increased at that point. Almost invariably the spinous process of the last lumbar vertebra lies on a level with the greatest abdominal prominence.

The peritoneum invests the posterior aspect of the uterus lower than the anterior and covers the upper part of the posterior vaginal wall. The uterine fasciæ descend with their net-work of veins and lymphatics almost to the orifices of the urethra and rectum.

Quinia as an Oxytocic. S. H. Plumb. *(Amer. Jour. Med. Sci.,* July, 1873.)—The writer claims that quinia is just as much an oxytocic as ergot is. Those writers who have denied this action to quinine have not clearly understood the meaning of the word. An oxytocic is a remedy which *promotes* delivery, not one which *induces* it. Dr. Plumb states that he has practised medicine for more than twenty-five years in a malarious district, and has had occasion, very frequently, to administer quinia to pregnant women, and yet has never seen any ill effects follow its use. For the last fifteen years he has used it as an oxytocic, and is fully convinced of its efficacy in promoting delivery. It possesses, moreover, one great advantage over ergot, that under its influence the labor pains preserve their natural intermittent character, thus avoiding the constant uterine action which follows the use of ergot, and which of itself would, in some cases, contra-indicate the use of that drug altogether.

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* Second Semi-annual Report.

Dr. Wm. L. Lincoln (*Trans. Minn. State Med. Soc.*, 1873), in a report on obstetrics recently made to the Minnesota State Medical Society, confirms these views of Dr. Plumb, and gives an account of several cases in which he gave quinia to pregnant women. His experience went to prove that, when given during labor, the pains became at once more severe and regular. In those cases, however, where it was prescribed for malarial fever, or diseases arising from some malarial influence, no uterine action whatever followed its administration.

Induction of premature Labour.—(Liverpool and Manchester Med. and Surg. Reports, 1873, p. 170.*)* Dr. Walter Whitehead suggests an improvement on the plan originally proposed by Dr. Barnes. The method, as described in his "Lectures on Obstetric Operations," consisted of the introduction overnight of an elastic bougie several inches within the uterine cavity. This was supposed to be held in position by the remainder of the instrument which was to be coiled up in the vagina. Within twenty-four hours some uterine action would have set in. The cervix was then to be dilated by means of hydrostatic bags, the membranes ruptured and the child delivered. The chief obstacle which interfered with the success of this operation was the great difficulty experienced in attempting to retain the bougie *in situ.* Dr. Whitehead has suggested a most admirable improvement to this plan. To the end of the bougie he attaches an air-pessary. The bougie is first placed for a few moments in warm water and afterwards anointed with olive oil. It is then introduced, either with or without a speculum, within the uterine cavity. The pessary is inflated and the small tap at the end of the tubing, which connects with the pessary, is turned and made secure by a little piece of sticking plaster. It is then to be passed through an aperture made in the centre of a perineal bandage, which is held in position by a second band passed around the waist. The pessary holds the bougie in position, dilates the vagina in anticipation of the expulsion of the fœtus, thus facilitating the ulterior stages of the labor, and acts as an additional excitant of uterine action. In support of his views, Dr. Whitehead gives the details of six cases, in all of which the instrument worked admirably.

Chloral as an Anæsthetic. (Trans. Edin. Obstet. Soc., 1872.*)*—Dr. E. Lambert gives the details of eleven cases of labor, during the course of which the hydrate of chloral was administered with a view to producing anæsthesia. In some of the cases the results were rather negative, but in several the patients appeared to be in a semi-conscious state, and after delivery reported that they had experienced but little pain. He advises its administration in the dose of fifteen grains repeated every quarter of an hour until some effect is produced. With some patients as large a dose as a drachm may be required, but he considers that small doses frequently repeated always act better than larger ones given at long intervals. It is chiefly adapted to the first stage of labor; although, in some of the cases which he reports, the anæsthesia lasted until after the birth of the child.

Schroeder confirms this statement of Lambert and adds that, although in some cases the intervals between the pains will be found to be lengthened, yet the efficiency of the pains will be found to be unquestionably increased. As early as 1870 *(Amer. Jour. Med. Sci., Oct.,* 1870*)* Dr. Du Hamel called the attention of the profession to the great value which he had derived from the use of chloral in labor. He gave it in twelve grain doses every hour, for three hours, with very great benefit to the patient.

Position in Labor. (Medical Examiner, July 1, 1873.*)* In a paper recently read before the Iowa State Medical Society, Dr. J. W. Smith calls the attention of obstetricians to the great influence which the position occupied by the patient during delivery has on the course of the labor. He thinks that most cases of labor have a lateral obliquity or pressure, and that the patient should always therefore lie on the side corresponding to the pelvis which is most filled or pressed upon by the presenting part. The woman's head should be low, as in that position the fundus can move more freely. One arm should be placed back of her, or the elbow be sharply flexed, the hand only being allowed to rest in front of the chest. In this position she cannot easily turn on her back, thus defeating the full advantage to be derived from her position. In cases of obliquity, pendulous abdomen, uterine inertia &c., he also advises the use of a wide bandage as a supporter. By a careful attention to the position of the patient, Dr. Smith thinks that the duration of ordinary labor may be greatly shortened, thus lessening not only the sufferings of the mother and the risk to both mother and child, but, in this way also, the necessity for instrumental interference will often be avoided.

Irregular uterine Action during Labor. (New York Med. Jour., June, 1873.*)* Dr. Lusk, following the usual classification, distinguishes, as examples of irregular uterine actions, pains in excess, deficient pains, cramps of the uterus and the various forms of stricture. As regards the first of these varieties he questions whether the uterus ever acts with such an undue degree of energy as *per se* to constitute a pathological condition. Strong pains, such as occur in cases of obstruction to the passage of the child, may become a source of danger, though their action is oftentimes beneficial; and, in the strong pains, we have in our possession, as suggested by Michælis, always the least dangerous means of ending the labor. It is true that, owing to the violent straining, such as is often noticed in women who possess such an undue degree of reflex irritability as impels them to an excessive use of the diaphragm and abdominal muscles, serious accidents, such as prolapsus and inversio uteri, lacerations of the uterus, vagina and perinæum, hæmorrhage &c., may occasionally follow a precipitate labor in consequence of excessive uterine action. The subcutaneous injection of morphia or the production of complete anæsthesia by chloroform will suspend the action of the voluntary muscles, and thus remove this source of danger.

Too weak pains may be oftentimes pathological. In many of these cases, however, it is better to wait and not resort to the use of oxytocics, provided that the uterus remains slack, and therefore does not compress the fœtus. In these cases, when interference is called for, a judiciously-selected operative procedure is best resorted to, or ergot may be administered. In a limited number of cases a regulated pressure, made through the abdominal walls upon the fundus uteri, as advised by Kristeller, may be found useful.

Strictures of different parts of the uterus are classed by many writers among the causes of difficult labor, but Dr. Lusk questions this opinion, and, while admitting, of course, the existence of circular, oblique and longitudinal muscular fibres, claims that their importance has been greatly exaggerated. He doubts whether, during labor, the uterus ever contracts except in its totality, and he ascribes these so-called strictures to insufficient uterine action. In these cases there is no necessity for bloodletting, or the use of tartar-emetic or belladonna ointment; the chief indication for treatment is to relieve the acute suffering, which usually accompanies such a condition of the uterus, and then in time the tonic contraction will disappear of itself. This is best done by the administration of morphia either by the mouth or hypodermically. In some cases, where anodynes and anæsthetics fail, the rupture of the membranes will be followed by the happiest results. In those cases where our object is to overcome rigidity of the cervix quickly, other methods having failed, the use of Barnes's dilators will act most beneficially. Occasionally, the head having passed through the cervix, the tonic contraction of the uterus will prevent the advance of the shoulders. This state is due not to the spasm of any special bundle of circular fibres, but to the fact that the uterus has become conformed to the fœtal irregularities. Whether this condition is met with in a head or breach delivery it is best overcome by kneading and compressing the uterus so as to excite expulsive pains. The condition before delivery, known as uterine rheumatism, may be due to hysterical hyperæsthesia, intestinal irritability, early stages of inflammation or to deficient elasticity (seyfert) of the peritoneal covering of the uterus. Such pains as these disappear, under the use of warm baths, blankets, hot drinks and Dover's powders.

Eclampsia. Dr. Isaac G. Porter (New London, Conn.) considers that convulsions are occasioned by the presence of a toxic agent in the blood, and that this agent must be eliminated by purgatives, diuretics or diaphoretics. As a very active and efficient method of treatment he advises the use of the "wet pack." He gives the particulars of a case (*Amer. Jour. Med. Sci.*, July, 1873) in which it was tried with perfect success after therapeutic means of acknowledged power had failed. The patient had had some thirty convulsions when she was placed, her clothing having been previously removed, on a sheet wrung out of water as hot as could be borne. She was rolled up in this, blankets being rolled outside of it. Hot water was used rather than cold in this case, as there was a slight attempt on the part of nature to eliminate the poison by diaphoresis. In cases, however, where the skin is hot and dry, the "cold pack" is to be preferred. Within an hour she passed into a quiet sleep, and became universally wet with perspiration which, if not urinous, was at least very offensive. She had but one convulsion after the "hot packing" was resorted to. She remained "packed" five hours, after which the diaphoresis was continued by milder means.

Dr. Alexander Milne reports a case of convulsions (*Trans. Edin. Obstet. Soc.*, 1872) in which very marked relief followed the administration of sixty grains of the hydrate of chloral. This remedy was highly recommended by Rabl-Rückhard *(Berlin. Klin. Wochenschr.,* 1869, No. 48), who used it with success in the treatment of puerperal convulsions. He preferred, however, to administer it subcutaneously.

Schroeder advises that narcosis be produced as rapidly as possible by the inhalation of chloroform, and the condition be subsequently kept up by subcutaneous injections of morphia. (*Manual of Midwifery,* Schroeder, London, 1873.)

Labor complicated with Malignant Disease of the Genital Passage. (Lancet, March 1, 1873.*)*—Dr. J. J. Phillips (London) reports two cases of labor complicated with malignant disease, in which is clearly shown the advantage to be derived from the efficient employment of hydrostatic pressure as a means of effecting a gradual dilatation of the genital passage. The first was a case of cancer of the cervix uteri. The anterior lip of the cervix was occupied by a hard mass about the size of a pullet's egg, while a similar swelling, about half of that size, occupied the posterior lip, a firm rim of os uteri connecting the two swellings. The patient had been in labor over twenty-four hours, the os dilating but slightly. Barnes's bags were introduced and subsequently filled with water. As soon as the cervix admitted of the introduction of the largest bag, version was performed and the patient delivered of a stillborn child. The patient died of cancer some eighteen months after delivery. The second was a case in which the whole anterior wall of the vagina was occupied by an indurated mass, having a foul, irregular, ulcerating surface. It was deemed advisable to induce labor at the eighth month. The membranes were accordingly ruptured; a spherical bag, about two inches in diameter, was introduced into the vagina and distended by hydrostatic pressure. The pain which followed, was relieved by a subcutaneous injection of morphia. Later, a Barnes's bag was introduced, as the lower part of the vagina had yielded but little to the spherical bag. The child was subsequently delivered with the forceps. The patient soon after left the hospital, and, though the disease had steadily progressed, was alive some six months later. There is no question but that, occasionally, an incision may be absolutely necessary, but these cases show that, where the malignant disease is not far advanced, dilatation by means of water-bags may be sufficient.

Craniotomy.—The chief difficulty which the operator has to encounter in performing the operation of craniotomy is to be found in the extraction of the fœtus. The perforation of the fœtal head is comparatively an easy task, although we cannot but allude, in passing, to the great advantage which, even in this part of the operation, Braun's curved trephine has over any of the various cutting perforators used so generally in this country. The German instrument avoids any possibility of spiculæ of bone being left to injure the vaginal canal in the subsequent extraction of the fœtus. The head having been perforated, the question then arises how is the extraction to be performed. Various instruments have been invented for this purpose, which, while they differ in some trifling details from each other, may yet be divided into two classes, the cephalotribes and the cranioclasts.

In a most excellent article recently read before the New York Obstetrical Society, Dr. Paul Munde calls the attention of obstetricians to the cranioclast as improved and used by the Vienna School.

In this paper *(Amer. Jour. of Obstet.*, May, 1873) the writer alludes to the great size and bulk of the cephalotribe, which would alone prevent its free use in cases of extreme pelvic deformity, unless indeed it be applied in the transverse diameter; in which case the very compression which follows would cause the antero-posterior diameter of the head to lengthen and thus render the contraction all the more difficult, since this diameter corresponds in most cases to that pelvic diameter which is in such case abnormally shortened. He also calls attention to the fact that it is with great difficulty that the mutilated head can be firmly grasped with the cephalotribe, and that frequently serious injury is inflicted to the maternal parts by the instrument slipping. All of these objections are avoided by the use of the cranioclast, an instrument first described, in 1860, by Simpson, and since then greatly modified and improved by Braun and his colleagues in Vienna.

Dr. Karl Rokitansky, Jr. *(Beobachtungen über Kraniotomie.—Wiener Med. Presse*, 1871) gives the following figures as showing the comparative results of craniotomy cases terminated with the cephalotribe and with the cranioclast:—Out of 52,394 cases of confinement in Professor Karl Braun's clinique, during ten years and three months, one hundred and three were terminated by craniotomy. In eight cases, after trepanation was performed, the pains expelled the child. The cephalotribe was applied in forty-three cases with the following results:—The instrument slipped off in eight cases; in two cases, the child could not be delivered with the cephalotribe, and version had to be performed; in six cases, the head had to be crushed in different directions; in eight cases, ruptures of the cervix occurred, and in three cases a vesico-vaginal fistula followed the delivery. Of the mothers, twenty-one died, sixteen of the deaths being the result of puerperal disease.

On the other hand, in fifty-two cases the extraction of the child was performed by means of the cranioclast. In no case did the instrument slip, or was it found necessary to re-apply it. Of the mothers, nineteen died, fifteen of puerperal disease. Comparing these results with the results following the use of the cephalotribe, Rokitansky says "all of the unpleasant occurrences accompanying the use of the cephalotribe were found wanting during the operation with the cranioclast."

Dr. Munde closes his article by giving Rokitansky's résumé of the advantages of the cranioclast.

1. Its application is possible in every diameter of the pelvis and is never attended by the difficulties peculiar to the employment of the cephalotribe in some cases.
2. Owing to its smaller size, and the fact that the solid blade is introduced into the cavum cranii, it needs a much smaller field of action.
3. The action of locking is very easy, as the lock remains external to the vulva, and the blade lying in the cavity of the skull can be moved freely in all directions without fear of injuring the maternal passages.
4. It never slips.
5. It is equally reliable with the preceding as with the succeeding head.

6. Injuries to the genital organs do not follow its use.
7. It can be intrusted much sooner than the cephalotribe to the hands of a but moderately skilful operator.

Forceps.—Fortunately, as regards the sufferings of the mother and the safety of both mother and child, the forceps are daily being used more and more frequently by the profession. In a report of 1400 cases occurring in his obstetric practice, Dr. Thos. Savage states (*Lancet*, Feb. 22, 1873) that in 1,437 births he used the forceps 220 times, or about once in every 6½ deliveries. Of the children thus delivered, 129 were males and 91 females. As showing the great change which has come about in the use of the forceps, he alludes to the fact that according to the statistics of the Royal Maternity Charity of London (1828-1850 inclusive), forceps were used *seventy-three* times in 48,996 deliveries, or about once in 670 cases. Craniotomy was resorted to *sixty* times in the same number of cases.

Besides the usual indications for the use of forceps, Dr. Savage advises that they should be used when the uterus is in a state of constant contraction, the patient being in a state of pain all the time, the head being pushed steadily forward and never receding.

According to the annual report of the Rotunda Lying-in Hospital in Dublin (*Dublin Jour. Med. Sci.*, Feb. 1873), forceps were used 131 times out of 1,193 deliveries, or once in $9\frac{1}{10}$ cases. In thirty-five instances forceps were used before the os was fully dilated. Of these last cases, two terminated fatally; both of the patients, however, had gastritis at the time they entered the hospital.

Zymotic Diseases.—From the Annual Report of the Rotunda Hospital above alluded to, the following interesting facts are taken. Scarlatina appeared three times. In the first case, the rash appeared on the fifth day. The patient was at once removed to another hospital. Four other patients in the same ward went out well. In the second case the rash appeared on the third day. The patient was at once removed, and four other patients in the same ward were discharged well. The third case broke out on the fifteenth day after delivery. There being only two other patients in the ward at the time, and as a space of one bed intervened between them and her, she was allowed to remain, and was discharged in due time well. The other two patients suffered in no way from the presence in the ward of the patient with scarlatina.

Ten cases of variola occurred in the hospital, nine being among the patients and one in one of the inmates. The latter was moved at once to another hospital and died. In one case, the woman entered the hospital with the disease. She was delivered and then sent to another hospital. In seven cases the disease appeared at varying intervals after entering the hospital, viz., one in 12 hours, one in 24 hours, one in 26 hours, two in 3 days, two in 4 days. Six of these were sent to another hospital, and one was removed to a small ward. In one case the disease appeared on the ninth day, in the child, which died forty-six hours later. The mother continued perfectly healthy. She had never been re-vaccinated, but had two well-marked cicatrices on her arm.

All of these cases of variola were more or less in contact with the other labor patients, in whose wards they were for a period varying from six hours to four days; and yet in no instance did the disease extend from the one individual. Six cases of mania occurred, five being unmarried. Two died; one from extreme mental distress, the other from extreme renal disease.

Twenty deaths occurred during the year, being an average of 1 in $59\frac{13}{20}$. Of these 20 patients, 14 died from accidental causes, thus leaving only six which died of zymotic disease. This lessens the average to one in $198\frac{5}{6}$. Of these six cases of death occurring from some zymotic cause, one took place in November (Ward No. 5), one in April (Ward No. 5), one in May (Ward No. 6), one in July (Ward No. 2), two in August (Wards No. 1 & 2). In these wards all the other patients confined at the same time went out well.

Dr. Johnston closes his report by calling attention to the fact that, although epidemics prevail with a fatal issue and to a fearful extent outside the hospital, and notwithstanding that patients are admitted from the infected localities, they do not exist in the hospital, and if, perchance, a patient is admitted with disease upon her, it is not disseminated through the institution, never having once extended beyond the individual case.

(To be concluded.)

DIGESTIVE POWER OF SALIVA AND PANCREATIC JUICE DURING INFANCY.—The *Medical Times and Gazette*, May 31, 1873, states that the recent experiments of Korowin, of St. Petersburg, upon the saliva of new-born infants and sucklings, in regard to the time of its very earliest appearance and its fermentative power at different ages, deserve careful attention. Korowin, by giving to infants pieces of compressed sponge to suck, and then squeezing from these whatever saliva, if any, might be collected, was able to determine that saliva might be obtained from the mouth of a child only a few moments born. The secretion is, however, very scanty. From the end of the first month of life, and especially after the sixth week, the amount of saliva which may be removed increases much. In the third month, as much may be obtained as in the first month in one tenth the time. In the fourth month, the saliva begins to flow visibly from the mouth of the child.

The saliva of the child possesses its diastatic or fermentative property from the time of its first appearance—that is, immediately after birth. The action of the saliva, however, is not always equally powerful; on the contrary, it increases steadily and rapidly with age up to a certain point. It seems certain that while its diastatic power increases up to the eleventh month of age, it then reaches its maximum—that is, a given amount of saliva of a child of eleven months and of an adult respectively, decomposes equal quantities of starch-paste.

Korowin removed the pancreas from the bodies of children who had died of various diseases, at various intervals *post mortem*. An artificial pancreatic juice was then prepared in the usual manner, and the amount of glucose formed estimated quantitatively. The results obtained are very important. In a child of one month the action of pancreatic juice upon starch is absolutely *nil;* it is first demonstrable in the second month, but very feeble; at the end of the third month of life it has become sufficiently powerful to make a quantitative estimation possible of the sugar formed. The diastatic action of the pancreatic juice, once acquired, increases in intensity with age, and reaches its maximum at the end of the first year of life.

Bibliographical Notices.

Chemistry: General, Medical and Pharmaceutical, including the Chemistry of the U. S. Pharmacopeia. A Manual on the General Principles of the Science, and their applications to Medicine and Pharmacy. By JOHN ATTFIELD, Ph.D., F.C.S. Fifth Edition. Revised from the Fourth (English) Edition by the author. Philadelphia: Henry C. Lea. 1873. Pp. 606.

Within five years this manual has passed through five editions, the last American one (the third) having been issued in 1871. Much new material ("altogether about seventy pages") has been added to this last edition, and many corrections have been made, so as to bring the standard of the work up to the present stand-point of chemical science. The chapter on the "General Principles of Chemical Philosophy" has been entirely re-written, and contains very clear statements and explanations of the more recent theories. The chemical laws are clearly worded, and the definitions given are accurate and concise. In some of the theoretical points the author differs from most chemists, such as, in his idea of the acid "radicals," and of the quantivalence of iron. He speaks, for instance, of NO_3 as the radical of nitric acid, and of SO_4 as the radical of sulphuric acid, instead of NO_2 and SO_2 respectively; and he states that the iron in ferric compounds is trivalent instead of quadrivalent, most authors considering that one combining unit of each atom of iron in the ferric compounds is saturated by the other, while the remaining three combining units of each atom are saturated by three of some other element or radical, as chlorine in ferric chloride (Fe_2Cl_6).

The arrangement of the elements is somewhat novel, both the non-metallic and metallic being subdivided according as they are used with greater or less frequency in pharmacy, so that some elements, which are very closely allied to each other chemically, are widely separated in the book. Thus bromine is classed with those but little used, and separated from chlorine and iodine, between which it is intermediate in its chemical properties; and, moreover, the propriety of arranging bromine among those elements of the least practical importance is questionable. The treatment of lithium, manganese, nickel, chromium and bismuth among the metals is separated from that of those metals to which they are closely allied chemically, and the acids are also arranged on the same principle.

The best tests for the different substances are given, and the action of the reagents used is fully and clearly explained. The chemical reactions which take place in the performance of the most important tests are also given, and the importance of being able to describe the effect of reagents by the writing of reactions is fully impressed upon the mind of the student. It is in this way that the action of ferric hydrate (hydrated sesquioxide of iron) upon arsenious acid, and of the mixed ferrous and ferric sulphates upon hydrocyanic acid or alkaline cyanide is explained, thus giving the student by a mere glance the *rationale* of the antidotal effect of these agents.

Several analytical tables are given in order to show the action of group reagents in qualitative analysis, but the methods for separating the metals from each other and the precautions necessary to be observed are not as fully described as in the special text books on qualitative analysis, nor are the tables quite as complete. With the assistance of an instructor, however, to supply these deficiencies, the manual will prove very valuable to the student as a laboratory text book on qualitative analysis.

To the student of pharmacy the work is invaluable, the methods for preparing all of the official compounds in the Br. and U. S. Pharmacopœia being given and fully explained. The most recent preparations, too, have found a place in this edition. The means for detecting the most common adulterations in medicinal preparations are also given, and in the appendix a table giving the official tests for such impurities.

In that portion of the book which treats of organic chemistry, the molecular constitution of chemical substances is well explained, and those organic compounds, which are of the greatest practical importance to the physician and druggist, are treated of. Of the alkaloids, only the principal ones are spoken of, their chemical properties and more important tests being given. Also, the principal members of the saccharine and other groups of organic substances are well described.

Physiological chemistry is scarcely alluded to, and those portions of the manual which treat of urinary chemistry and toxicology are very incomplete, and not entirely free from error. Thus, it is stated that the presence of bile in the urine is best detected by Pettenkofer's test, whereas this test is only applicable to the biliary acids, substances which are rarely tested for in the urine, and the pathological importance of which is not as yet accurately determined. The statement is also made that, in testing the urine for albumen by the heat test, it is best to previously acidulate the urine with "a few drops" of *nitric* acid, which would be pretty sure to retain the albumen in solution, were only a very small amount present, as is frequently the case in chronic degeneration of the kidneys. The whole of urinary chemistry including the analysis of calculi is disposed of in twelve and one-half pages, and toxicological analysis in ten pages.

The outlines of quantitative analysis, volumetric and gravimetric, are given, those processes being most fully described which are the most frequently used by the pharmacist. The quantitative determination of quinia and morphia, and the processes for estimating the value of cinchona bark and of opium are included.

The work contains many extremely valuable tables, among which may be mentioned very complete tables for the conversion of the Troy and metric systems of weights and measures, and formulæ for the conversion of the degrees of the Fahrenheit, Centigrade and Reaumur thermometric scales into each other.

For the pharmaceutical and medical student, Prof. Attfield's work forms an excellent text book on general chemistry, containing much valuable information which is not included in most text books on general chemistry. For the study of medical chemistry, however, the student must have recourse to special treatises, and we have yet to see a good text book upon medical chemistry for the use of the medical student.

E. S. W.

Boston Medical and Surgical Journal.

Boston: Thursday, August 21, 1873.

The petition from the slaughtering establishments, bordering upon the Miller's River basins, to the Board of Aldermen of this city, seems to have ignored the testimony of the Board of Health in regard to the cause of the terrible odors to which the public have of late been subjected. It seeks to lay the blame entirely upon the very imperfect system of drainage which has been adopted by all the cities bordering on the waters of Charles River. We have lately alluded to the report of the joint commission of the Board of Harbor Commissioners and the State Board of Health, to the cities of Cambridge and Somerville, appointed by an act of legislature last year to investigate this nuisance, the smells and complaints of last summer having rendered some action absolutely necessary. The commission engaged the services of an eminent engineer to make such investigations as were deemed necessary. A careful survey of the whole district was made, the actions and influence of the tides were closely studied, and the mud and water were subjected to chemical examination. The report of the engineer to the commission seems to have covered the ground thoroughly. The conclusions arrived at were based partly upon these investigations and partly upon the testimony of the parties interested. The commission was satisfied that the nuisance was produced, firstly, by the use that is made of the basins as a receptacle of the sewage draining from the cities of Cambridge and Somerville; secondly, by their having become precipitating basins for all the filth brought by the incoming tide, but *mainly* from the use made of them by the neighboring slaughtering establishments. The remedy is embodied in the following plan reported by the commission:—

"First—That the city of Cambridge complete its system of sewerage, so that such portion of its territory as is now drained into Miller's River be drained into sewers already made or projected, having their outlets into Charles River.

"Second—That the City of Somerville construct a main sewer, from Milk street through Prospect, Washington and Cambridge streets, into Tufts' Dock in Charlestown, on Mystic River, and connect with this main sewer, lateral sewers, in such a manner that whatever now drains into the Miller's River basins, will drain by this main sewer into the Mystic River, and that the city of Somerville obtain the requisite legislation to carry this main sewer through the territory of the city of Charlestown.

"Third—That the cities of Cambridge and Somerville fill up with clean gravel, to the grade authorized by law, all the channel, flats, and basins of Miller's River, lying east of Prospect street in Somerville, and southwest of the Boston and Lowell Railroad; reserving at first from such filling, through the middle of said channel and basins to the outlet under the Boston and Lowell Railroad, a space not less than fifty feet in width, where such a width is possible, until the drainage of the territory of Cambridge and Somerville, now leading into these basins, has been diverted from them into Charles and Mystic Rivers, as hereinbefore provided, and then, in the months from November to April inclusive, finally removing from this reserved space the mud which has there accumulated in the process of filling the adjoining areas.

"Fourth—It will then remain to enforce those sanitary principles which the Commonwealth has already adopted with reference to industries of the class peculiar to this neighborhood."

This advice has to a certain extent been finally adopted, for the filling-in has begun. The work, however, will not be completed until long after the nuisance for this year at least has ceased. In the mean time we doubt if much can be done to mitigate the evil during the warm weather that is to come. We do not think that the petitioners are justified in the statement that "it is certainly a fact that no Board of Health, Committee on Health, grand jury or other official body has ever been able to fix upon those places [slaughter-houses] the stigma of having originated or produced the offensive smells or deleterious vapors."

We do, however, sympathize strongly with Mr. Squire's views on the subject of the drainage of Boston and its vicinity. With perhaps as great natural advantages as any city ever had, both in the formation of its land and the flow of its waters, on which to elaborate a perfect system of drainage, we are much worse off, in this respect, than even the great city of Berlin with a small and sluggish stream to discharge its filth into, and in many streets with a variation of level of scarcely two feet in as many miles. Our population is rapidly increasing, and many large and important areas are being filled in to meet the increased demand for land, and yet we have not thought it worth while to profit by the experience of other large cities. That of London, for example, which is mentioned in the petition, is too well known to need repetition here. The danger and expense there incurred will sooner or later be inevitably visited upon us. We think this subject of general drainage quite as important a matter to the city as the remedies to be applied to Miller's River; and we trust the source and motive of the petition will not stand in the way of a careful consideration of this subject by the Board of Aldermen.

THE annual meeting of the British Medical Association was held on the 5th, 6th, 7th and 8th of August. According to the last accounts, the prospects of a successful meeting were unusually good. The Association has of late years been growing greatly in popularity, if we may judge from the large yearly accession to its numbers which it has enjoyed for some time, and, what is perhaps of still greater importance to its success, from the very general participation of eminent men in the annual exercises. The number of foreign visitors is also numerous, and we find among the names on the list some of the most distinguished men on the Continent. America and many other countries are also well represented. The names of officers of the various sections and the list of papers and contributions offer a very attractive programme. We also find several additional interesting features, such as preparations for an exhibition of patients to illustrate different methods of treatment, and an "annual museum," or exhibition of objects of interest in connection with medicine and surgery, including all kinds of specimens, preparations, instruments and new medical works, all of which are set forth in a carefully prepared and illustrated catalogue. The President of the Association is Alfred Baker, Esq., of Birmingham; the President elect is Sir William Fergusson. In reading the accounts of the extensive preparations for the entertainment of over a thousand medical men, one is struck with the active and increasing interest manifested by Englishmen in their national association, and the strong contrast here afforded to the meetings of the American Medical Association and the class of men who attend them. The differences existing in the organization of the two bodies would afford an interesting and, perhaps, to ourselves, a profitable study. One great advantage possessed by the British Association is its place of meeting, which in itself affords facilities and inducements to tempt even the most eminent and the busiest men. The value of a representative journal is doubtless very great, and, indeed, has done much to increase its popularity. We shall look for the reports of the meeting with much interest.

"CATCHING COLD."—The *British Medical Journal*, June 28, 1873, contains an article with this heading. It states that, although our opportunities for studying the pathology of colds are very numerous, yet we know very little about it. Almost all that can be stated is that the diseases which are popularly ascribed to cold, are liable to come on after the whole body, or parts of it, such as the feet, have been quickly cooled below the normal, or, in other words, have been chilled. There are two factors concerned in the cooling of the body or its parts. One is the nature of the external medium, such as air or water, which is in contact with the body; the other is the condition of the blood-vessels. Dry air has very little power to abstract heat, provided it be still. The presence of a slight wind, however, from the constant contact of fresh particles of cold air on the surface of the body, soon carries off its heat. If moisture is present in the air it greatly increases its power of abstracting heat, and when wind and moisture are combined, the chilling effect reaches its maximum. Experience has shown us that it is not so much the absolute lowness of temperature which gives rise to colds, as sudden changes from a higher to a lower. The reason of this remained unknown till the recent researches of Professor Rosenthal cleared up the mystery. When cold is applied to the surface of a healthy animal the cutaneous vessels contract, and by thus confining the blood to the interior of the body, prevent its cooling, and preserve the temperature of the vital organs, unless the application of cold be continued for a considerable time. This is not the case, however, when the animal has been previously exposed to warmth sometime before. The cutaneous vessels become paralyzed by heat, and remain dilated even after the cold has been applied. The blood is thus exposed over a large surface, and becomes rapidly cooled, even though the temperature of the surrounding medium is not very low. Confinement in a choky office, hot theatre, or crowded ball-room will have this effect on man. From such places people pass out into the cool open air, or will sometimes purposely place themselves in a draught. The blood which is coursing through the dilated vessels of every part, is rapidly cooled below the normal, and, on its return to the internal organs, cools them much more quickly than it could have done had the person simply been exposed tocold without dilatation of the vessels by previous warmth. Rosenthal lays much stress on the great effect of sudden *cooling* in bringing on a cold, the sudden change in the temperature of the blood producing an irritating effect, and inducing inflammation in any weak organ in a way that a gradual alteration would not do. It would seem, however, that the alteration must be from a temperature above to one below the normal temperature of the blood, and not a mere reduction from one considerably above the normal to one at or near it. When much heated, we may stand for a short time in a cool atmosphere with impunity; but if we stand long enough to carry the cooling process too far and produce a shiver, we run a great risk of catching cold. The effect of a chill in causing inflammations, may be partly due to the effect of cold on the tissues themselves, and partly to the hyperæmia, which will occur in some parts when the blood is driven out of others by the contraction of their vessels. Rosenthal is inclined to ascribe the chief power to the former of these causes. Everybody knows the beneficial effect of cold baths, cold sponging, etc., in "hardening" persons, as it is termed, so that one who employs them is able to face almost any weather, and to endure sudden changes of temperature without injury. Rosenthal believes that by these means the tone of the cutaneous vessels is increased, so that they do not become so much relaxed by heat as to be unable to contract with sufficient force, when necessary. The power of regulating the temperature is thus preserved, and the person is protected from catching cold.

BLACKLEY ON THE CAUSES AND NATURE OF CATARRHUS ÆSTIVUS (HAY-FEVER OR HAY-ASTHMA).—The *London Medical Record*, June 18, 1873, contains an account of the investigations of Mr. Blackley, as recorded in a recent publication, regarding the causes and nature of hay-fever. For more than twenty years, the author has been a sufferer from the distressing malady of which he writes.

Mr. Blackley's experiments appear to show that the inhalation of the pollen of various plants, suffices to excite the disease; and that whenever the disease occurs, there is a direct relation between the severity of the symptoms and the amount of pollen floating in the air. Experiments were made with the pollen of the grasses, and also with that of plants belonging to thirty-five other natural orders. Almost every experiment was attended with such definite results as to show that pollen is the most powerful, if not the sole cause of the malady. Pollen was tested in five different ways: (1) by applying it to the mucous membrane of the nose; (2) by inhaling it, and thus bringing it into contact with the mucous membrane of the larynx, trachea and bronchial tubes; (3) by applying a decoction of the pollen to the conjunctiva; (4) by applying the fresh pollen to the tongue, lips and fauces; (5) by inoculating the upper and lower limbs with the fresh moistened pollen.

When a small portion of pollen, just sufficient to tinge the tip of the finger yellow, was applied to the mucous membrane of the nares, some of the symptoms of hay-fever were invariably produced, the severity and continuance of which were dependent on the quantity applied, and the frequency with which the application was repeated.

In all the observations on pollen, the author was the subject of his own experiments. Obviously it would have been futile to experiment on any subjects not possessing the idiosyncrasy which renders them liable to hay-fever. When pollen is moistened, it may be seen under the microscope, to change its form, swell up, and forcibly discharge its granular contents; and it is probable that this process occurs when the pollen is brought in contact with the nose and air-passages; and thus the fluid, which is poured out abundantly during a severe attack of summer catarrh, tends to increase and perpetuate the disease, by acting rapidly upon the pollen, which continues to be brought into contact with the irritated mucous membrane.

The author has found that pollen may, by dialysis, be made to pass through membranes thicker than those which line the bronchial tubes and air-cells; and he suggests the probability that the finer particles of this matter may, in some cases, pass through the mucous membrane of the air-passages, and thus entering the circulation, give rise to the constitutional symptoms which are sometimes developed. He has also shown a direct and constant relation between the amount of atmospheric pollen and the intensity of the symptoms in his own case.

He exposed slips of glass, so prepared that the atmospheric pollen should adhere to them, in the open air, for twenty-four hours at a time. These slips were then placed under the microscope, and the number of pollen-grains contained in equal areas counted. The result showed a continual increase in the amount of atmospheric pollen in the open country, from the beginning to towards the end of June, while the grass is in flower, and after this a gradual decrease. More atmospheric pollen is found in the open country than in the suburbs of Manchester, England—near which city most of the observations were made—and more in the suburbs than in the centre of the city. The gradations in the severity of the author's symptoms, corresponded very closely with his microscopic observations of the amount of atmospheric pollen. In other respects, too, there is a close correspondence between the varying severity of the disease and the amount of pollen in the air; thus, the symptoms are usually more severe on a hot and dry day, and often much mitigated by a comparatively cold and damp atmosphere; they are much milder within doors than when the patient is exposed to the open air. Hence some observers have concluded that a high temperature alone may be sufficient to explain the increased severity of the symptoms, but Mr. Blackley's explanation seems more satisfactory. He shows that, on a hot day, the pollen is more abundantly developed and thrown off into the air; and it is obvious that active exercise, by increasing the number and force of the inspirations, will bring into the air-passages a greater quantity of the irritating organic matter, which is the exciting cause of the malady.

The author believes that the dyspnœa of hay-asthma is the result of submucous œdema excited by the irritant action of pollen; and he doubts whether bronchial spasm has any influence in causing the phenomena of the disease. From this, the reviewer, Dr. Johnson, dissents. He believes that the theory of bronchial spasm alone suffices to explain the paroxysmal dyspnœa of hay-asthma, as well as of ordinary so-called spasmodic asthma.

After trying a great variety of remedies, Dr. Blackley has found none productive of permanent benefit. The only advantage derived from drugs has been the palliative influence of belladonna or opium ointment applied to the nostrils. The best means of escaping the disease is to take a cruise well out to sea during the hay-asthma season, or to go to a projecting part of the sea-coast where the prevailing winds are from the sea. For those who cannot go to the sea-side, the next best residence is the centre of a large town.

SECONDARY SYPHILIS COMMUNICATED BY AN INFANT TO ITS NURSE.—Dr. Angus Macdonald reports a case in which secondary syphilis was communicated by an infant, suffering from hereditary disease, to its grandmother, a woman 59 years old. The affection appears to have been communicated by means of the tube of the child's nursing bottle, which the grandmother was in the habit of putting to her own mouth before applying it to the mouth of the child. The symptoms consisted of a severe sore throat and a general eruption on the skin, distinctly syphilitic in character.—*Edinburgh Med. Jour.*, July, 1873.

Correspondence.

SEA-SHORE DOCTORS.

DOWN EAST, July 20th, 1873.

MESSRS. EDITORS,—Do you know what a *sea-shore doctor* is? I came very near saying *country doctor*, but, like some other titles, it might confuse. So I say *sea-shore doctors*, though they live in the country at times. The habitat of the true country doctor is in the country. He is there at all times. The other is a bird of passage, living in the city for nine or ten months in the year, and going off for a summer vacation—sometimes here, again there; to the Farms this year, to the Spyglass House another year, spending a few weeks in Sweet Potato Valley, or perhaps at Chicopee Harbor. His real residence is Boston, New York, or some of our larger towns. He doesn't do much at home, though he talks about his business pretty largely; and we poor country doctors wonder how he could leave for so long a time with so large a practice, till we find him out.

You will find him on the piazza of the Mambrino House, this evening, between a couple of your city ladies, to whom he is as attentive as if he hadn't a wife and children at home. He will be telling of the consultations which professors of surgery, &c., have asked for with him—the consequence of certain peculiar cases published by him. Us, poor devils, he thinks very little of. Mrs. Parnassus wanted me to call him in to see her child a day or two since. The child was taken sick before his arrival here, or I probably should not have had the case. He spent the time delivering a lecture to the lady and myself, clinical lecture, in which he detailed the diagnosis of cholera Asiatica and cholera infantum. He doesn't believe in homœopathy, but thinks it very unfair not to try it, if patients desire. He was terribly startled, last year, by a case of variola, and was the means of clearing out the Gammon Hotel, he being obliged to leave on business of importance—called away, &c. I saw the patient shortly after. The eruption was very abundant, but he had made a perfectly excusable mistake. Rhus toxicodendron, I think Dr. White would call it. How much better it was to make this mistake than it would have been to call smallpox "ivy pizen."

After all, the sea-shore doctor does not annoy the country doctor very much. His stay is very short in any one place, not over six or eight weeks, and generally less than that. How much he may bother you city gentlemen, is another question. If he manages to get hold of an anxious mother, whom he can frighten or cajole—impose upon in any way—I can imagine that he may make mischief for a time. From what I have heard of him, I know that if the patient returns home sick, our sea-shore friend follows him, continues to prescribe; never remembers that there is a family physician in the case, and sometimes has to be discharged. Even then, I am told, that he speaks of "Dr. ——'s irregular behavior in prescribing for *my* patient."

One of these doctors left here, the other day, and one of his patients fell into my hands. It was one of those who always employ a follower of Hahnemann at home. The little pellets which had been left made the patient a little stupid. The bottle was marked *Bry.* Now I am no chemist, but taking them myself, as by the Dr.'s direction to the patient, I *proved* them to be something very like an opiate:—dry tongue, loss of appetite, hoarse voice for an hour or two, itching skin, constipation for two days, strange propensity to sleep, and in that sleep to dream. I believe it was the 30,000th *potenz*, if it was anything, it affected me so potentially. Did you ever take any *Bry*? Very truly yours,

COUNTRY DOCTOR.

Obituary.

At a meeting of the members of the Massachusetts Medical Society resident in Lawrence, the following resolutions on the death of their late brother, Dr. Seneca Sargent, were adopted:—

Whereas, Dr. Seneca Sargent, an esteemed member of our Society, who, by his untiring labors for the advancement of professional interests, and the development of medical science, won the respect of all who knew him, has been removed by death; therefore,

Resolved, That the members of the Massachusetts Medical Society, resident in Lawrence, most deeply mourn his death, and kindly sympathize with the family of our late brother, believing, as we heartily do, that our Society and the community at large have lost an eminent physician and worthy citizen, one ripe in years, who has rendered his name worthy of respect and of grateful remembrance.

Resolved, That a copy of these resolutions be transmitted to the family; also, to the Boston Medical and Surgical Journal, and to the local papers.

WM. D. LAMB,
D. DANA,
C. N. CHAMBERLAIN.

Lawrence, Mass., Aug. 11, 1873. C. C. TALBOT, *Sec.*

Medical Miscellany.

QUICK.—They have rather a rapid way of living and dying in Memphis. Dr. Miller, of Atlanta, who was in Memphis while the cholera prevailed there, narrates a sprightly incident. At 7 o'clock a man went to market and bought his breakfast, went home, cooked it, and was eating it, when he was taken with cholera. He sent for Dr. Miller, who visited him at 9 o'clock, prescribed, and told him he would be back in an hour. At a quarter past 10 he returned. The man was not only dead, but had been buried, and the room swept and garnished for another occupant. What could Dr. Miller have given him?—*New York Tribune.*

"QUOSQUE TANDEM!"—Records of chloroform deaths are as frequent as ever in the Journals. We quote one from the *Clinic*:—

A most lamentable accident occurred in the office of Dr. Wm. H. Mussey, of this city, on last Wednesday afternoon. A young and apparently healthy German presented himself to have three or four fingers dressed after an accident by machinery. Chloroform was administered and before full narcosis was established the patient was seized with convulsive tremor and immediately succumbed.

THE CHAIR OF PHYSIOLOGY AT EDINBURGH.—It is stated the chair of Physiology in the University of Edinburgh is likely to become vacant by the resignation of Dr. Hughes Bennett, whose health is, unfortunately, far from robust. The names of four distinguished graduates of the University—two resident in Edinburgh, and two in London—are mentioned as those from among whom his successor may be selected. But we believe that, although it is probable that Dr. Bennett will think it proper to resign his chair at no distant date, it is by no means certain that he may not make another effort to perform some of its duties next session.—*British Med. Journal.*

DEATH FROM HEAT-STROKE IN A VAPOR-BATH.—An inquest was held at Stratford, Essex, a few days ago, on the body of a man who died while taking a vapor-bath in the public bath-rooms of the locality. The temperature of the bath at the time of the occurrence was not, according to the evidence of the proprietor of the rooms, above 110°; but Drs. Whitehouse and Kennedy, who had examined the body soon after death, expressed their belief that it could not have been less than 200°. The jury returned a verdict of "Death from coma, accelerated by the use of an over-heated bath."—
—*London Lancet.*

ENERGY OF THE BOARD OF HEALTH OF BOSTON.—The board of health has begun to take active measures in regard to unhealthy tenement houses, and has determined to enforce the law rigorously. Yesterday a number of places were visited, causing considerable consternation among both owners and occupants. On Hammond park the board visited a block of four houses, with a carpenter, who bored holes in the floors, beneath which were found accumulations of the most stagnant and offensive water. These houses were numbered 57, 59, 61 and 63, and were rented in flats. One family has been sick ever since they entered the block, and one tenement was found in the worst possible condition of filth. Orders will be issued to-day to have the houses purified. The board visited a block in Westminster street, numbered from 20 to 36, under the cellar floors of which they found, after having them taken up, more or less stagnant water, which exhaled the most offensive and fever-breeding odors. These houses average two families, but so offensive has the atmosphere become that many of the tenants have packed their furniture and are moving out. The houses numbered from 9 to 21 Windsor street were also visited by the board. Their condition was such as to justify the most prompt and effective action, and steps will be taken to put them in a condition fit for occupancy.—*Advertiser*, Aug. 14.

Exercises on Anæsthesia.—We find in the *Buffalo Medical Journal* the following curious programme of a public lecture on Anæsthesia, lately delivered in New York.

"*Order of Exercises.*—Organ Voluntary. History of Anæsthesia, Dr. J. Marion Sims; Chemistry of Anæsthetics, Prof. R. Ogden Doremus, M.D., with Experiments. Practical Application of Anæsthetics in Surgery, Professor Frank H. Hamilton, M.D. Address by Rev. Henry Ward Beecher. Organist, Mr. Walter. Mayor Havemeyer will preside. For this occasion Mr. William Steinway has kindly tendered the use of Steinway Hall, Wednesday evening, May 21st, 1873, at 8 o'clock."

It is a curious illustration of the difference of "the point of view," that this display was promoted by a number of the most eminent physicians and citizens of New York, and evidently suggests to their mind nothing which savors of the ludicrous or unseemly. No one would be bold enough on this side of the water to attempt what appears to us as incongruous a series of "exercises" as were ever presented on the boards of a theatre.—*Brit. Med. Journal*, July 19, 1873.

Women Students at Zurich.—The Russian decree relative to women students at Zurich, has produced great excitement in that town. All the newspapers are unanimous in condemning the arbitrary conduct of the Russian Government in the matter, though several of them admit that the Russian women students often behave in a manner discreditable to their sex. One of the professors of the university of the town observes, in a letter to the *New Zurich Gazette*, that the expulsion of the Russian women from the university will probably be followed by a large increase in the number of the women students from other countries, as German, French, and English women have hitherto been deterred from going to Zurich for their education by the improper behavior of the Russian women who attend the lectures there. A correspondent of the *Cologne Gazette* asserts that upwards of one-half of the Russian women students at Zurich live disreputably, and that many of the Swiss families in the town have consequently refused to receive them in their houses. That some belong to secret political societies is also a matter of notoriety; one of them even acted as vice-president at a "red" meeting of working men. The Russian women students have now decided, after some stormy meetings, that all but two shall leave Zurich next term, and proceed for the completion of their studies to Paris, Leipzig, Munich, and Heidelberg.—*Medical Press and Circular.*

Mortality in Massachusetts.—*Deaths in sixteen Cities and Towns for the week ending August* 9, 1873.

Boston, 223—Charlestown, 19—Worcester, 21—Lowell, 30—Milford, 2—Chelsea, 6—Cambridge, 33—Lawrence, 17—Springfield, 15—Lynn, 17—Fitchburg, 6—Newburyport, 9—Somerville, 21—Fall River, 33—Haverhill, 8—Holyoke, 10. Total, 470.

Prevalent Diseases.—Cholera infantum, 165—consumption, 50—dysentery and diarrhœa, 25—scarlet fever, 13—cholera morbus, 10.

Four deaths from smallpox occurred in Holyoke.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, August 16th, 197. Males, 88; females, 109. Accident, 1—apoplexy, 1—asthma, 1—inflammation of the bowels, 4—disease of the bowels, 1—bronchitis, 3—inflammation of the brain, 2—cancer, 4—cerebro-spinal meningitis, 1—cholera infantum, 57—cholera morbus, 3—consumption, 25—convulsions, 4—cyanosis, 2—debility, 4—diarrhœa, 8—dropsy of the brain, 3—dysentery, 4—diphtheria, 2—erysipelas, 1—scarlet fever, 7—typhoid fever, 5—gangrene of the lungs, 1—disease of the heart, 6—insanity, 1—disease of the liver, 3—congestion of the lungs, 1—inflammation of the lungs, 4—meningitis, 4—marasmus, 8—old age, 5—paralysis, 4—premature birth, 4—pyæmia, 1—peritonitis, 4—rheumatism, 1—suicide, 1—teething, 1—whooping cough, 1—white swelling, 1—unknown, 3.

Under 5 years of age, 111—between 5 and 20 years, 8—between 20 and 40 years, 35—between 40 and 60 years, 19—over 60 years, 24. Born in the United States, 140—Ireland, 37—other places, 20.

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Original Communications.

ON THE SMALLPOX EPIDEMIC IN BOSTON, IN 1872-73.

Read before the Massachusetts Medical Society, June 3, 1873.

By M. E. Webb, M.D. Bowd., of Boston.

It is not the intention in this paper to enter upon a scientific discussion of smallpox, but simply to give a short report of the origin, progress, abatement and general management of the disease as it existed in Boston for sixteen months, commencing January 1st, 1872, and ending May 1st, 1873. This will be presented in the form of facts, with a few statistics; leaving the conclusions to be drawn from them, in the main, to others.

It should be stated, however, at the outset, that prior to January, 1872, during at least six months, sporadic cases were continually occurring among newly arrived emigrants, or those receiving the contagion from them, and in persons who had visited Lowell during the prevalence of an epidemic there. This relates only to patients treated in hospitals, but I am informed that there was a larger number of cases existing in the city during the year 1871 than was generally supposed, but there were few removals to hospitals, and no records of cases kept. Judging from the fact that there were but few deaths, we infer that the type of the disease was exceedingly mild. It increased somewhat during the autumn, but it was not until the time at which this report commences that the disease assumed an alarming aspect or that a general removal to hospital commenced.

The only hospital accommodations existing at that time within the city limits were eight beds at a house on Albany street, in the rear of the City Hospital, and under the charge of the directors of that institution. These, however, were only for patients who could pay fifteen dollars per week, the only free beds being at Galloupe's Island; this island was used, also for quarantine purposes, and, it is needless to add, was inadequate to meet the wants of an epidemic, wholly unfit for the proper treatment of the disease, the transportation of patients endangering the lives of those very sick and no doubt causing many deaths. Moreover, the place was strongly objected to by all classes, associating it, as they did, with the neighboring penal institutions; the removal by force to such a place, was looked upon as a system of cruelty exercised upon the helpless. This was early and fully realized by Dr. Green, City Physician, who represented it in its true light to the City Council; and in due time, an order was passed authorizing the trustees of the City Hospital to receive at the house on Albany street, without pay, such patients as were too sick to be removed to the Island, and such as would go willingly when they would not be taken from their homes to the island without the exercise of force. An old building, formerly used as a hospital for cholera, upon the same grounds and adjoining the Smallpox Hospital, was partially fitted up; and these two buildings, which could be crowded to a capacity of fifty beds, were sufficient to accommodate all patients prior to July, 1872, except those exempted by law, or others from tenement houses who could not be removed without endangering life. Poor as this was, and disgraceful as it was that a city like Boston should have no better accommodations for the care of unfortunates suffering from this dread malady, it was infinitely better than nothing—better than the Island, which was the next thing to it ; and it undoubtedly prevented a general epidemic at that time with a large loss of life.

In the midst of the good work which this place, bad as it was, was undoubtedly doing, the citizens in the vicinity, bringing into service newspaper sensationalism which portrayed the horrors of having a pest house in this locality (although there never was a case of the disease traceable to it), so excited the public that a petition was extensively signed to have this nuisance abated. The City Council, after a whitewashing investigation (the principal thing being to justify their own neglect, and to throw the responsibility upon somebody else), gracefully yielded to public clamor and closed the only place they at that time possessed, without a prospect of having another; at the same time frowning upon a petition signed by hundreds of the citizens who fully appreciated the situation, and asked for the establishment of an independent Board of Health.

From the time the Albany Street Hospital was closed, there was a steady increase of the disease; the poorer classes, living in crowded localities, secreted their friends, sometimes not even employing a physician for fear that the sick one would be sent to the Island, and often a reported death would be the first intimation the authorities had that the disease existed in a certain locality. Then, of course, the information came too late to avail anything. Fumigation was performed by the Health Office, the so called Board of Health establishing the price for its performance at three dollars for one room or five dollars for a whole tenement; and the Superintendent of Health was not expected to perform this duty without the payment of this fee, or on special order from the Board. This duty was efficiently performed, however, and if this officer had had entire charge of the Department, and had not been crippled by the red tape of higher powers, the health affairs of the city would have been much more successfully and satisfactorily managed. As it was, the tenants were, in many instances, too poor, and the owners were too penurious to pay the sum demanded, and thus a large number of infected dwellings were left with no precautions whatever taken to disinfect bedding, clothing, &c., or the disinfection was partially performed by the ignorant tenants themselves.

Is it surprising that, under these circumstances, the poison was rapidly disseminated? In spite of the untiring devotion of Dr. S. A. Green, the City Physician, who sacrificed personal as well as professional interests to battle alone the advances of this enemy, and who was often openly and bitterly opposed by those in authority in whose interest he so arduously labored, pestilence walked in our streets, rode upon our horse-cars, visited our hotels and public buildings, and our tenement houses, dirty and filthy as many of them were before, now became hot beds for contagion. Against 91 cases and 32 deaths reported for the month of July when the Albany Street Hospital was closed, we had 872 cases and 246 deaths reported for the month of December, the same year.

Thus, this obstinate do-nothing policy continued, and on that policy lies the responsibility, in a great measure, of a large loss of life, a material injury to the business interests of a city crippled by a great conflagration, a harvest field from which the poison was scattered throughout the towns all over the Commonwealth, as shown by the last report of the State Board of Health. Approaching elections, however, and the general cry from all classes of citizens for reform, warned the authorities that some efforts must be exerted to stay the spread of the disease; and a large force of vaccinators were engaged to perform house-to-house vaccination. This force, unorganized and without systematized responsibility, entered upon its duty, but the result was far from satisfactory, so far as checking the ravages of the disease was concerned, and, with one or two exceptions, no records of importance were kept.

Meanwhile a piece of swamp land had been purchased on Swett street and a hospital erected which, unfortunately, was burned the night before it was ready for occupancy. Of this building, I know nothing; but the one that rapidly succeeded it, while it was undoubtedly better than none, was unfit, both by its location and appointments, for the satisfactory treatment of the disease.

In time, a new City Government was formed which, fortunately for Boston, consisted mostly of new members, fully alive to the emergency. Encouraged by the heroic action of the mayor, who knew his duty and dared to act, the City Council did what the old City Government for six months had repeatedly refused to do, namely, established a Board of Health independent of party or power. One of the first official acts of this Board was to take possession of the Roxbury almshouse as a hospital; this building proved capacious enough, with the one upon Swett street, already opened, to meet every demand. A corps of vaccinators was immediately organized and made responsible for the vaccination and revaccination of all classes. The result was highly satisfactory. The disease rapidly subsided under the combined effects of isolation and vaccination, and in three months the epidemic was conquered and public confidence was fully restored.

Having thus alluded to the rise and fall of the epidemic, I will add a few statistics bearing upon the disease, as well as to substantiate the assertions made. They are taken from the records of hospitals in this city, from those of Galloupe's Island and of the Health Office. The only record of those not removed is the bare fact that they had smallpox, and the City Registrar's office shows that nearly one-third of them died.

The number of cases of smallpox reported during the time embraced in this review was 3,722.

The whole number of deaths resulting from it was 1,026.

The percentage of mortality was 27.56.

These figures are sufficiently large to show the severity of the epidemic, exceeding the per centage of either New York or Philadelphia death-rates.

The unusual virulence of the disease is also shown by the large number of hæmorrhagic cases which occurred. Of the 1232 cases in hospitals, we find 97 of the hæmorrhagic form, or 7.58 per cent., all of which proved fatal. There was a still larger proportion among those not removed; but allowing the same percentage for the whole number of cases, we have 282 deaths from this, the most fatal form of the disease. There were a few cases that had a hæmorrhagic tendency in the earlier stages of the disease, but the eruption abated early, and the patients recovered. True cases of this kind have always died, in all the instances witnessed. It occurred most frequently in vitiated constitutions, syphilitics, drunkards, prostitutes, &c. Males and females suffered equally. The middle-aged seemed more liable to this form than the old, while it has been very rare in children; in fleshy people, it occurred rather oftener than in the emaciated. The prodromata were generally more marked than in the milder or even severe forms. Extreme prostration came on rapidly, followed by an erythema over the entire body, assuming a lobster red color. The conjunctiva was injected with blood, with here and there papules or later vesicles filled with the bloody serum characterizing the disease.

On the second day of the eruption, sometimes earlier but seldom later, hæmorrhages from the mucous surfaces would take place,—in males, from the mouth, fauces, bladder and rectum; in females, invariably from the uterus. If a woman was pregnant, she miscarried early and died from excessive hæmorrhage. It has not proved so contagious as milder forms; and there was always a peculiar odor, not experienced in either the discrete or confluent varieties. The diagnosis was, in some cases, difficult, from the resemblance to other exanthemeta, and because the characteristic appearances would not become evident till the patient was moribund or even dead; and sometimes they were discovered, even then, only by diligent search over the entire body.

(To be continued.)

TEMPERATURE IN YELLOW FEVER.

By Joseph Jones, M.D.,

Professor of Chemistry and Clinical Medicine in the Medical Department of the University of Louisiana, Visiting Physician of Charity Hospital, New Orleans, La.

The following table contains the results of my own observations upon the pulse and temperature in yellow fever, consolidated with those of several other observers; viz., W. Arnold M.D.,* Charles Faget, M.D., D.M.P. &c., 159 Burgundy street, New Orleans; Just Touatre M.D., D.M.P., 142 Dumaine street, New Orleans; and Thomas Layton, M.D., D.M.P., Magazine street, New Orleans.

My thanks are especially due to my learned and distinguished confrère, Dr. Chas. Faget, for the opportunity of examining the careful thermometric records preserved by himself, and Drs. Touatre and Layton, during the epidemic of 1870.

The general results of my investigations upon the changes of temperature and conditions of the pulse in yellow fever may be formulated thus:—

The maximum elevation of temperature, in yellow fever, is rapidly attained upon the first, second and third days of the disease, ranging from 102° F., to 110° F., in the axilla; and, as a general rule, from the third to the fifth day, steadily falls, and sinks down to the normal standard and even below; in some fatal cases, it rises again towards the end, rarely, however, reaching or exceeding, during the stage characterized by passive hæmorrhages, black vomit, jaundice and urinary suppression, 104° F.; and, as a general rule, never attains the high degree of temperature characteristic of the first stage of active febrile excitement.

The supervention of an inflammatory disease, or the occurrence of an abscess, or the access of malarial fever, after the first stage of active febrile excitement, may, in like manner, cause a progressive elevation of temperature, with slight evening exacerbations.

The pulse, at the commencement of the febrile attack, is rapid and full; the increase in the frequency of the pulse does not, however, as a general rule, continue to correspond with the elevation and oscillations of temperature, as in many febrile diseases; and, in many cases of yellow fever, the remarkable phenomenon is

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* Practical Treatise on the Bilious Remittent Fever (Yellow Fever), with illustrative Tables and Cases. On The Temperature of the System in the Febrile Diseases of Jamaica. London: 1840.

TABULAR STATEMENT OF THE VARIATIONS OF THE PULSE AND TEMPERATURE IN YELLOW FEVER.

No. of Case.	Temp. and Pulse.	Day of Disease.										Results and Remarks.
		1	2	3	4	5	6	7	8	9	10	
1	Pulse.	108	118	118								Female. Age 28. Intern. fever. Scarlet color of surface. Death on third day of disease.
	Temp.	103.5°	106.8°	108°								
2	Pulse.	110	110	108	100		120					Male. Death on ninth day.
	Temp.	108°	108°	108°	108°	110°	110°	110°		100°		
3	Pulse.	120	120									Male. Death on seventeenth day.
	Temp.	108°	108°			109°				110°	100°	
4	Pulse.		110	90		96						Male. Death on eleventh day.
	Temp.		106°	107°			108°				98°	
5	Pulse.	110	110									Male. Death on seventh day.
	Temp.	107°	108°									
6	Pulse.	100		120								Male. Death on third day.
	Temp.	107°		107°								
7	Pulse.		110	100	140							Male. Death on sixth day.
	Temp.		109°	109.5°		110°						
8	Pulse.	100	96		90	100	100					Male. Recovered.
	Temp.		105°				100°					
9	Pulse.	110	100		120	120	126					Male. Death on sixth day.
	Temp.	109°				100°						
10	Pulse.	90	85	90	85							Male. Death on fourth day.
	Temp.	108.5°										
11	Pulse.	100	90	86	86	86	80	86				Male. Death on eighth day.
	Temp.	107°			107°							
12	Pulse.		110	100	90	110	90					Male. Recovered.
	Temp.	105°	105°	105°	104°	104°	100°					
13	Pulse.			100								Male. Recovered.
	Temp.		105°	100°								
14	Pulse.	118	90	80	76	70	68	60				Male. Convalescent on fifth day.
	Temp.	103.5°	101.9°	101°	99.4°	99.4°	98.8°	98.8°				
15	Pulse.	118	110	78	70	70	68					Male. Convalescent on fourth day.
	Temp.	103°	101.9°	100°	99°	99°	99°					
16	Pulse.	116	82	84	82	78	76	80	74	60	64	Male. Case protracted, on account of formation of parotid abscess. Recovered. During fever, verat. virid. rapidly reduced pulse.
	Temp.	103.2°	101.8°	101.8°	101.6°	101.6°	101.6°	102.2°	100.8°	101.2°	99.2°	
17	Pulse.	86	62	70	60	60						Male. Convalescent on fifth day.
	Temp.	104°	101.2°	101.2°	100.2°	99.2°						
18	Pulse.	102	94	88	80							Male. Convalescent on fourth day.
	Temp.	104.4°	100.6°	99.4°	99°							

19	Pulse.	126	100	90	94	84	80					Male. Aged 67. Death on sixth day.
	Temp.	104.6°	104°	102.2°	102.2°	100°	99°					
20	Pulse.	110	75	60								Male child. Convalescent on third day.
	Temp.	104.5°	101.4°	100.4°								
21	Pulse.	120	106	90	82	92	110	90	80	70	100	Adult male. Case protracted by abscess in elbow, which appeared on third day. Convalescent on seventh day.
	Temp.	104.4°	103.5°	103.6°	104.9°	104.8°	102.8°	101.5°	101.2°	101°	100.8°	Veratrum viride, in twenty-drop doses, rapidly reduced the pulse.
22	Pulse.	120	80	62	80	70	70	70	70			Male. Convalescent on seventh day.
	Temp.	105°	101.2°	100.4°	101.8°	99.5°	99°	99.5°	99°			
23	Pulse.	120	112	110	76	76						Adult male. Age 63. Died fifth day of disease.
	Temp.	105.8°	105°	104°	100.4°	98.5°						
24	Pulse.		100	86	80	70	70					Male child. On fourth day, attack of indigestion caused rise of temperature. Convalescent on sixth day.
	Temp.		101.8°	100°	103°	99°	98.8°					
25	Pulse.	122	110	102	100	130						Death on fifteenth day of disease.
	Temp.	102.2°	103.2°	101.9°	101.1°	100.9°						
26	Pulse.	150	120	100	90	88	100	70	84			Eruption of urticaria appeared on fifth day, and caused oscillation of temperature. Convalescent on seventh day.
	Temp.	103.4°	104°	102.5°	102.2°	101°	101.4°	100.2°	100°			
27	Pulse.		110	98	84	80	80	76				Male. Age 32. Convalescent on seventh day.
	Temp.		104°	103.5°	102.4°	100.8°	100°	98.8°				
28	Pulse.	110	80	94	82	98						Adult male. Black vomit on fourth day. Death on fifth day.
	Temp.	103.8°	104.5°	103°	101.8°	101.8°						
29	Pulse.	110	100	84	90	92	90	80	104	114	114	Adult male. Died on tenth day of disease. On ninth day, temperature fell rapidly from 102.2° to 98.5°, whilst pulse increas'd to 114.
	Temp.	103.8°	104.4°	103.7°	103.6°	102.2°	101.8°	102.2°	102.2°	102.2°	98.5°	
30	Pulse.	118	116	104	100	98	100					Adult male. Died on seventh day.
	Temp.	104.2°	105.2°	104.3°	104.2°	103°	102.8°					
31	Pulse.	72	68	68	72	64	52	48	48			Male. Age 19. Jaundice on third day. Conval. on ninth day.
	Temp.	101.3°	102.2°	101°	101.5°	99.8°	100°	99.8°	99.5°			
32	Pulse.	108	100	108	99	80	70	70	60	50	44	Male. Age 23. Convalescent on seventh day.
	Temp.	Fever.	102.2°	103.8°	102.2°	100°	100.4°	98.5°	96.8°	96.8°		
33	Pulse.			110	90	74	76	64				Female child. Convalescent on seventh day.
	Temp.	Fever.	Fever.	104.5°	102.6°	102.8°	100.8°	99.6°				
34	Pulse.	130	130	110	100	84						Female. Convalescent on fifth day.
	Temp.	102.2°	104°	104 6°	102°	99.4°						
35	Pulse.		114	113	105	70	63	105	105	112	136	Adult male. Jaundice on 4th day. Black vomit on 6th day. Death on 11th day. After supervention of black vomit, pulse increas. in freq.
	Temp.	Fever.	103.6°	104.8°	104.2°	103°	100.2°	101.6°	101.3°	99.2°	99.8°	
36	Pulse.	120	120	100	90	74	72	68	78	90	80	Adult male. Convalescent on tenth day.
	Temp.	Fever.	105°	105°	103°	102°	102°	101.5°	102.8°	101°	100.2°	
37	Pulse.		108	90	80	62	60	60	54	50	50	Male. Age 27. Convalescent on eighth day.
	Temp.	Fever.	105.8°	105.9°	104.4°	103.4°	101.5°	100°	99°	96.6°	100.5°	
38	Pulse.	116	100	92	100							Male. Age 22. Temperature fell from 106.5°, third day, to 101.5° fifth day. Death on fifth day.
	Temp.	106.5°	106.5°	105°	101.6°							
39	Pulse.		85	96	110							Male. Aged 35. Jaundice and black vomit preceded death. Temperature from 106.5°, 3d day, to 99.2° on day of death, 4th day.
	Temp.	Fever.	105.9°	106.8°	100°							

TABULAR STATEMENT OF THE VARIATIONS OF THE PULSE AND TEMPERATURE IN YELLOW FEVER. (Continued.)

No. of Case.	Temp. and Pulse.	Day of Disease.										Results and Remarks.
		1	2	3	4	5	6	7	8	9	10	
40	Pulse. Temp.	 Fever.	112 101.8°	104 104°	100 104°	80 102.7°	80 102.6°	80 102.2°	74 101°	74 102 6°	74 101.2°	Male. Age 20. Jaundice on fifth day. Pulse became slow, but temperature remained above normal standard. Convalescent fourteenth day.
41	Pulse. Temp.	90 103°	70 102°	84 101.6°	69 104.4°	70 103.8	70 102.5°	60 101°	50 99.8°	44 99°		Male child. Under veratrum viride, rapid fall in pulse. Convalescent tenth day.
42	Pulse. Temp.	 Fever.	100 103°	85 102°	94 105°	83 104.5°	84 103.7°	84 100°				Female. Age 15. Temperature most elevated on fourth and fifth days. Convalescent on eighth day.
43	Pulse. Temp.	98 105.1°	80 105.2°	76 105°	70 103.4°	74 102.2°	84 101.2°	108 100.2°				Male. Age 40. Jaundice on third day. Pulse depressed during jaundice. Temperature fell from 105°, third day, to 100.2°, day of death, seventh day.
	Pulse. Temp.	 Fever.	112 105°	110 104°	108 101.2°	96 102°	86 102°	69 101°	76 101°	80 99.2°	68 99.8°	Male. Age 32. Jaundice and hæmorrhage from kidneys. Convalescent on ninth day.
45	Pulse. Temp.	 Fever.	 Fever.	 Fever.	82 100°	82 100°	85 100°	80 98°	80 98°			Male. Aged 37. Jaundice, third day. Urine contained albumen and casts. Convalescent on seventh day.
46	Pulse. Temp.	 Fever.	 Fever.	 105°	 104°	 104°	130 102.5°	140 103.5°				Progressive diminution of urinary excretion. Death.
47	Pulse. Temp.	 Fever.	 Fever.	80 101°	72 101°	80 100.8°	80 101°					Black vomit. Jaundice. Urinary suppression. Death on seventh day.
48	Pulse. Temp.	 Fever.	 Fever.	84 100.5°	92 101°	80 100°						Black vomit. Jaundice and urinary suppression. Death on sixth day.

witnessed, of the pulse progressively decreasing in frequency and even descending below the normal standard, whilst the temperature is maintained at an elevated degree; and, on the other hand, the pulse frequently increases in frequency, but diminishes in force, near the fatal issue; the occurrence of copious hæmorrhages from the bowels or stomach, may be attended with sudden depression of temperature, and increase in frequency, but diminution in the force and fulness of the pulse.

The remarkable progressive decrease in the number of beats of the pulse, after the first stage of active febrile excitement, in many cases of yellow fever, appears to be due to several causes, as the anatomical changes in the heart (acute fatty degeneration), and the retention in the blood of the bile and urinary constituents.

If the temperature of the trunk rises, in the first stage of yellow fever, above 105° F., the patient is in imminent danger, and if it reaches 107° to 110° F., death is almost inevitable whatever be the mode of treatment adopted.

In cases attended with the rapid rise of the temperature to 106° and beyond, in the first stage, death sometimes occurs suddenly, and apparently solely from the effects upon the blood and nervous system of the great elevation of the temperature, as in sun-stroke.

In the fact established by the preceding table, that an elevation of temperature, above 106° in yellow fever, was invariably followed by death, we have a powerful argument for the constant employment of the thermometre, in the investigation of the phenomena of this disease, as affording some grounds not only for prognosis, but also for treatment.

In those cases which are attended with great elevation of temperature, the physician should seek to diminish the excessive heat by those measures which reduce the action of the heart, promote free perspiration and directly reduce the heat of the surface; to accomplish these ends, the most efficient remedies appear to be veratrum viride, and the sponging of the surface with water, or with a mixture of water, acetic acid and alcohol.

It appears, also, that the administration of an active purgative, either calomel or castor oil, followed immediately by one or two full doses of quinine, in the first twenty-four hours of the fever, produces beneficial effects in unloading the portal circulation, and in controlling, to a certain extent, the production of animal heat.

In yellow fever, the profession needs, in future, accurate records of the thermometric changes, as influenced in the early stages of the disease, by the measures just indicated.

The preceding table also illustrates the fact, that jaundice, urinary suppression and black vomit are often accompanied by a slow pulse and but moderate elevation of temperature.

If the thermometric changes of yellow fever be projected upon a chart, and if a comparison be instituted with the thermometric changes of the other diseases, it will be observed that those of the former disease more nearly resemble the rapid rise and sudden fall of temperature observed in varioloid, without secondary fever, mild scarlatina, and simple uncomplicated pneumonia, which runs its course without fresh accessions of inflammatory action; whilst, on the other hand, they differ materially from the rapid and oft-recurring elevations and depressions of temperature characteristic of the various forms of malarial fever.

The cause of the rapid rise and sudden declension of the temperature in yellow fever must be sought chiefly in the changes induced in the blood, and in those organs upon which the circulation and integrity of the blood depend.

New Orleans, La., July 31, 1873.

A Physical Sign of Intestinal Perforation.—Dr. Spaggia relates, in the *Gazetta Clinica dello Spedale Cuico di Palermo* for February (quoted in *The London Med. Record*, May 14th), the case of a woman, aged twenty-five, who died in the hospital after having suffered for some days with symptoms of peritonitis and intestinal perforation. At the autopsy, the intestines were found agglutinated by exudation of not very firm consistence, and some pus lay between the convolutions. There were found in the small intestine, three perforations at considerable distances from each other, each about the eighth of an inch in diameter, having well defined edges next the interior of the tube, and irregular on the serous surface. Attention is specially drawn to the the existence of a sound which was heard on auscultation a little more than an inch below the umbilicus. It was synchronous with inspiration and expiration, being more distinct with the former than with the latter. It resembled the respiratory sound as heard at the sides of the vertebral column in the upper dorsal region. After commenting upon the mode of production of this sound, which he attributes to the passage of gas, into and out of the peritoneal cavity, through the perforations in the intestine, Dr. Spaggia arrives at the following conclusions:

1. A murmur synchronous with the respiratory acts, heard by auscultation on the abdominal wall, and resembling the respiratory sound in intensity and character, is a diagnostic sign of intestinal perforation. 2. The absence of this murmur is, however, no indication, when other symptoms of perforation are present, that this lesion has not taken place. The sound may be absent under various conditions, such as: (*a*) Extreme smallness of the cavity into which the perforation leads, especially if it be seated deeply in the abdomen, or removed from the ear of the observer by tumors lying anteriorly; (*b*) Closure of the perforation by a loop of intestine, or by a peritoneal tumor; (*c*) Intestinal adhesions; (*d*) The filling up, by previously formed exudation, of the cavity into which the exudation leads. This physical sign, noticed for the first time by Dr. Spaggia, is the more important in that its existence may clear up certain doubtful affections of the abdominal organs, in which it is a question whether gastrotomy shall be resorted to.

Progress in Medicine.

REPORT ON OBSTETRICS AND DISEASES OF WOMEN.

By W. L. Richardson, M.D.

[Concluded from p. 189.]

DISEASES OF WOMEN.

Intra-uterine Medication.—Dr. W. S. Playfair (*Lancet*, Jan. 4, 11, Feb. 15, 1873) opposes very strongly the use of intra-uterine injections. He believes that remedies can be applied to the interior of the uterus in a fluid state by a much safer method. After criticizing the various ways recommended by writers on this subject, he proposes to use swabs made in this manner:—a series of uterine probes must be made with metallic extremities measuring in length 2½ inches. They must be so fine that, when wrapped around with cotton wool, they will pass readily into the cavity of the uterus. These probes are attached to box-wood handles nine inches in length. The ends are made very flexible, so as to be easily made to conform to any flexion of the uterus. These probes must be wrapped smoothly and evenly with cotton wool. The os uteri is next exposed with whatever speculum is most convenient. The cavity of the uterus is then carefully wiped dry with one or more of these probes. This being done, a probe is next introduced, having been previously dipped in the agent to be applied. Care must be taken to wipe off any superfluous moisture, lest it run down into the vagina. The application of remedies in this way, if carefully made, is practically painless. As regards the particular agent to be used, there is great difference of opinion among writers on this subject. The best is a strong solution of carbolic acid prepared as follows:—add to the pure crystalline acid just enough water to keep it fluid (experience has shown this to be eighty parts acid and twenty parts water); an equal quantity of glycerine is then added; to the exterior of the cervix the pure fluid carbolic acid may be applied, but for the uterine cavity it is better to dilute it with glycerine. The great advantage which carbolic acid possesses over other caustics is that it never produces an eschar, nor does it cause the tissues to swell. In using it, therefore, we run no risk of causing any contraction of the cervical canal. The acid should be applied never oftener than once a week, and an interval of three or four days should always be left before and after the appearance of the catamenia. At first the application will often cause an increase in the amount of discharge from the uterus; but this soon subsides. The time required for the cure of a case of chronic uterine leucorrhœa varies greatly, and while one or two applications may be sufficient to effect a cure in one case, they may have to be continued for months in another.

Dr. Robert Barnes (*Brit. Med. Jour.*, Jan. 11, 1873) strongly advises that the use of injections into the uterine cavity be given up in all cases of marked flexion. Even if the cervix has been first dilated with tents, he does not consider their use free from danger, for it is impossible to prevent the flexion recurring, in which case the fluid is prevented from escaping. It is especially in these cases that the uterine cavity is usually enlarged and the Fallopian tubes dilated. Except in severe and urgent cases of menorrhagia, intra-uterine injections should never be used. The same agents can be applied in other ways, the most preferable of which is in the form of an ointment or plasma.

Dr. John Clay (*Lancet*, Nov. 30, 1872, Feb. 1, 1873) recommends the use of an insufflator made very similar to that used for insufflating the larynx. The open end, however, must be provided with a movable bulbous head, as otherwise it would be plugged up with mucus while being introduced within the uterine cavity. The pressure on the rubber ball not only opens the end, but ejects the powder at the same time.

Dr. J. Whitehead (*Brit. Med. Jour.*, Feb. 1, 1873) favors the application of remedies by means of Lallemand's porte-caustique. The ointment to be used is placed in the groove of the stilette, which is protruded after its introduction within the uterine cavity, and, by rotation, every portion of the mucous membrane can be reached.

Prognosis in Cases of uterine inflammatory Diseases. (*Obstet. Jour. of Gr. Brit. and Ireland*, July, Aug., 1873.)—Dr. E. J. Tilt considers that the danger to life from uterine inflammation is very slight, unless it gives rise to some complication such as ovaritis or peritonitis. The prognosis is bad if the patient comes of sickly parents, or has had herself an unhealthy girlhood, or other mucous membranes show a marked tendency to catarrhal inflammation. When the inflammation occurs in young women, as the result of a sudden checking of the menstrual flow, the prognosis is favorable, unless the passion of the patient be very strong, in which case relapses will be apt to occur. Occasionally, however, the inflammation comes on during the period known as the change of life or even subsequent to that; in these cases the prognosis is bad. Under the most favorable circumstances, the length of time required to effect a cure will be, to a certain extent, proportional to the duration of the disease before a proper treatment was begun. So long as the disease is limited to the cervix uteri, the prognosis is good, but the case is very different when the inflammation has passed from the cervix to the mucous membrane of the body of the uterus. If the body of the womb is found to be larger and harder than normal, the prognosis is very bad. Acute endometritis is a rare disease, and Dr. Tilt states that he has never seen a case of it where there were not evident signs of a pre-existing chronic inflammation of the body or neck of the uterus.

Uterine Tumors.—Dr. Keating recently reported (*Amer. Jour. Med. Sci.*, July, 1873) to the College of Physicians (Philadelphia) the account of a case of uterine submucous fibroid treated successfully by means of hypodermic injections of ergotin. After the sixteenth injection, the tumor was reduced, by measurement, to one-third of its size, and had been crowded down upon the cervix uteri in its efforts to force itself through the os uteri. At this point, owing to the impaired health of the patient, arising from a serious anæmia consequent on frequent and prolonged hæmorrhage and an acute attack of a prevailing influenza, the further use of the drug was for a time suspended. The injections were used almost daily, and were applied over the abdomen below the umbilicus. The formula used was as follows:—Ergotin, gr. xlv.; glycerinæ, aq. destil., āā ♏ cv. Syringeful (gtt. xx.) administered each time. The injection was always attended with excessive pain lasting nearly an hour. Very little local irritation followed, care being taken to make the injections as deep-seated as possible.

Dr. John Ashhurst, Jr., gives also *(loc. cit.)* the details of a case of a submucous fibroid of the uterus treated in this same way. The formula used was: ℞. Ext. ergotæ fld., ʒjss.; glycerinæ, ʒj.; aquæ, ʒij. Of this preparation twenty minims were injected almost daily in the sub-umbilical region on one or other side of the linea alba. After sixteen injections, the tumor was found to have diminished one-half. The injections are to be resumed after a short interval of rest. Pain followed the injections in this case as in the case of Dr. Keating, but not severe enough, however, to cause the patient to make any spontaneous complaint.

In a very valuable article on Interstitial Uterine Fibroma *(Gaz. Méd.,* Paris, 11, 1872), Dr. Abeille alludes to the mistakes in diagnosis which are constantly being made, as regards interstitial tumors of the uterus, from the neglect on the part of the attending physicians to make their examinations during menstruation. It is during this period only that these tumors can be readily detected, since then nature, in her effort to expel the tumor, pushes it downwards towards the cervix uteri, causing an unusual dilatation of that region. These tumors are by far the most dangerous of all uterine tumors, since they give rise to severe metrorrhagia and, owing to their peculiar position, are very easily overlooked in examinations of the uterus.

M. Gueniot, in a recent paper *(Gazette Méd.,* Paris, 11, 1872) contributed to the Académie de Médecine (Paris), considers that so many cases have now been reported as to establish, beyond question, the fact that certain fibroid tumors of the uterus are absorbed and thus disappear. While the absorption of tumors is, as a rule, a slow process, yet, occasionally, they take on a rapid dissolution, some cases having been reported where very large myomata have disappeared within a few months. In cases where absorption does not take place, uterine myomata may disappear either by spontaneous expulsion or by gangrenous suppuration. The method of absorption is the only one which is free from danger, and the efforts of the attending physician should therefore be directed towards bringing about this termination of the disease. Reasoning from analogy, these tumors, before they can be absorbed, must undergo a fatty degeneration. The remedies to be advised therefore are such as are known to favor a fatty metamorphosis of tissue. Such agents are arsenic, phosphorus, lead, &c. The puerperal state of the patient exercises only rarely any influence on the absorption of these tumors.

Dr. R. C. M. Page reports *(Med. Record,* Feb. 1, 1873) a case of a fibroid tumor of the uterus which was absorbed during pregnancy, and entirely disappeared during the retrograde development of the uterus after delivery.

Dr. Wm. R. Jordan reports *(Lancet,* March 29, 1873) two cases, in which large fibroid tumors of the uterus were successfully treated by a method known as enucleation. In the first case, a large tumor occupied the anterior wall of the uterus, presenting no marked projection into the cavity. An incision was made at the lowest point of the tumor about half an inch in depth. The cervix uteri was also divided on a line with the incision. The tumor was gradually protruded by the expulsive efforts of the uterus, until, on the 19th day, it was found filling the cavity of the vagina, from which it was easily removed. In the second case, the tumor occupied the posterior and left wall of the uterus. A similar mode of treatment was adopted. Nature at once set up expulsive efforts, and the tumor (27 ounces) was found filling the vagina on the third day after the operation. Owing to the great size of the tumor in this second case, ergot was given for several days after the tumor was removed, to aid the contraction of the uterus and as a prophylactic measure against the occurrence of hæmorrhage.

Ovarian Tumors.—Ovariotomy. Dr. J. Marion Sims has recently published (*New York Med. Jour.*, Dec., 1872—April, 1873) two excellent papers on this subject. In them he very briefly alludes to the past history of the operation and to the various methods which have been proposed for the management of the pedicle. For twenty years, he has advocated the plan of tying the pedicle with silver wire, and still thinks that it is the best treatment thus far proposed, though he questions whether it will not be found better in the future to apply torsion to the arteries, or else obliterate them by the enucleation of the pedicle from the coats of the cyst. As regards the results of the operation, Dr. Sims thinks that the mortality is altogether too great. He claims that the death of most of the patients is to be attributed to septicæmia. After carefully examining Mr. Spencer Wells's thirty-nine fatal cases, he considers that thirty-seven were the result of blood-poisoning, three being from pyæmia, and thirty-four from septicæmia. In all of these fatal cases, in which a *post-mortem* examination was made, a quantity of reddish serum, or grayish turbid serum or acrimonious serum was found in the peritoneal cavity. It is to these pent-up fluids that the blood-poisoning owes its origin. It seems, therefore, logical that the indication for treatment in these cases is to invent some method of draining off these poisonous fluids. As early as 1855, Dr. Peaslee (*"On Ovarian Tumors,"* page 509) used intra-peritoneal injections with a view to remove any accumulation of fluid within the peritoneal cavity. Instead, however, of occasionally washing out the cavity at the top, as Peaslee proposed, Sims advises that the peritoneal cavity should always be opened at the bottom, so that the fluids may constantly drain off. This opening should be made at the lowest point, namely through the Douglas *cul-de-sac.* Here a puncture should be made, in every case, and a tube passed into the peritoneal cavity so that all effusions into this cavity may spontaneously drain off.

As showing the advantage of this plan of treatment, he gives the details of four cases in his own practice where he used this plan for establishing a drainage. In the first case, a sero-sanguinolent fluid began to pass off by the tube very soon after the operation. Occasionally, a little warm water was thrown into the peritoneal cavity, by the vaginal portion of the tube. The case made a good recovery. The second case also recovered. In the third case, the proper tube was not used, and the patient died. The fourth case did nicely, the drainage-tube being worn for about a month.

Great care must be taken, in these cases, that the puncture shall be made at the *lowest* part of the Douglas *cul de sac.* In washing out the peritoneal cavity the utero-vesical pouch must be carefully washed out, so that its contents (if any) shall overflow into the

Douglas *cul de sac*. If care be taken in reference to these collections of fluid in the peritoneal cavity, one great source of septicæmic poisoning will be removed and the mortality which follows the operation of ovariotomy will be very greatly reduced.

Dr. A. Wernich (Berlin) gives *(Beiträge zur Geburtshülfe und Gynäkologie*, vol. 11, 2, pp. 143–149) an excellent *résumé* of the various opinions held by leading obstetricians as to the prognosis in cases of ovarian tumors when complicating pregnancy. In a case under his own care, an abdominal tumor, which had existed for some time without causing the patient any trouble, became the seat of the most violent pain a short time before delivery. Three weeks after delivery, the patient died and the tumor was found to be an ovarian medullary carcinoma. The writer thinks that very probably this tumor, originally benign, became under the influence of pregnancy transformed into one of a malignant character. Many writers, amongst whom may be mentioned Spiegelberg, Waldeyer, Rokitansky, Virchow, Wells and Hicks, have reported cases in which ovarian tumors took on a rapid growth during pregnancy, and after death were found to be malignant in character. These cases induce the author to approve of the conclusions reached by Dr. Wiltshire (London), who advises the extirpation of a multilocular ovarian tumor as early during pregnancy as the diagnosis of its existence can be established. All other methods of treatment he considers useless.

Dr. Ollier *(Orleans)* gives the details of a very remarkable case of pregnancy following ovariotomy (*Revue Méd. Française et Etrangère*, Dec. 28, 1872). The patient had been four times pregnant. For some time she had suffered from ovarian disease and three times had been tapped for the ascites occasioned by it. Subsequently, ovariotomy was performed and the tumor, which was found to be unadherent, was removed. The woman made a good recovery, and, three months after the operation, became pregnant. At the end of nine months she was delivered of twins.

Dr. Tillaux reports a case *(Gazette Hebdomadaire*, 12, 1873) of a unilocular ovarian cyst sucessfully treated by puncture through the wall of the vagina. The operation was followed, the first time, by the evacuation of about six pints of a fluid resembling in color *café au lait*. Tincture of iodine and water (2-1) was injected into the sac. A month later, as there were some symptoms that the sac was refilling, a second puncture was made and a pint of fetid pus evacuated. A tube was left in the sac, which was frequently washed out with solutions of carbolic acid. A month later, the sound was withdrawn. She has since been frequently seen, but there is no return of the trouble.

Les Ovaires et leur anomalies, par Le Dr. Albert Puech; Paris, 1873, pp. 155.—In this most exhaustive monograph, the writer gives a complete history of the various anomalies which have been observed in reference to the ovaries. A full report is given of twenty-eight autopsies, in which some anomaly was found. The conclusions reached are thus briefly summed up:—The absence of one ovary is not very uncommon; usually, however, other anomalies are also noticed. The accompanying complications are usually the absence of the Fallopian tube, the broad ligament, the round ligament, the uterine cornua, and the kidney of the side corresponding to the missing ovary. In ten cases out of twenty-one, the Fallopian tube was found either as a solid cord or in its normal condition. In half of the cases, the uterus was normal. As a rule, the vagina, vulva and pelvis were normal. The breasts were normal, except in two cases. The rest of the body was normal in some of the cases, while, in some, other anomalies were noted. The absence of the ovary is in no way incompatible with the perfect health of the woman.

Change of Life. (*Deutsche Klinik*, 5, 1873.)—Dr. Cohnstein, having made numerous inquiries as to the circumstances attending that period in a woman's life known as the "climacteric," has arrived at the following conclusions:—Menstruation is a physiological function, occurring between the ages of ten and forty-four. With the majority of women, the catamenia occur during a period varying from twenty-eight to thirty-four years; the average duration being thirty-one years. In 76 per cent. the menopause is gradually reached, the symptoms betokening its approach lasting from a month to two years. In 24 per cent. it is suddenly reached, such a termination being especially noticed when the sanitary conditions of the patient are unfavorable. The catamenia last longest in those women who menstruate early, who have more than three children which they nurse themselves, and are confined between the ages of thirty-eight and forty-two.

Amenorrhœa resulting from undeveloped Uteri. (*New York Med. Jour.*, June, 1873.)—Dr. W. H. Baker alludes to the insufficient attention which has been paid to the want of development of the uterus as a cause of amenorrhœa. In cases where there was a general undeveloped condition of all the reproductive organs, a corresponding want of development of the uterus has been noticed. In some cases, however, where the mammæ and the external organs of generation are normal, a careful examination will show that the uterus is undeveloped, and hence the amenorrhœa.

He cites three cases which came under his notice at the New York State Woman's Hospital, where galvanism or electro-magnetism were successfully used in the treatment of this condition.

Convulsive Diseases of Women. (*Obstet. Jour. Gr. Brit. & Ireland*, July, 1873.)—Dr. Barnes, in his Lumleian Lectures on this subject, stated the following propositions, as containing the main facts known in regard to the convulsive diseases of women.

1. Pregnancy and labor require for their due fulfilment an extraordinary supply of nerve-force.

2. This extraordinary supply of nerve-force implies a corresponding organic development of the spinal cord.

3. The provision of an extraordinary supply of nerve-force implies a greatly augmented irritability of the nervous centres, rendering them more susceptible to emotional and peripheral impressions.

4. The disturbances in nutrition, occasioned by pregnancy, almost always entail some alteration of the blood, which increases the irritability of the nervous centres, and favors the evocation of any latent convulsive or other nervous diathesis, as chorea, epilepsy, or vomiting.

5. When the blood-change wrought by pregnancy is marked by albuminuria, a poisonous action of peculiar intensity is exerted upon the nervous centres tending to produce eclampsia.

6. Obstinate vomiting in pregnancy probably sometimes proves fatal, by the development of an unknown organic or systemic morbid process.

7. Menstruation resembles pregnancy, in giving rise to an exalted central nervous erethism, and ovulation is a primary exciting cause of epileptic, vomitive and hysterical convulsions.

8. At the climateric age, again, there is a renewed susceptibility to convulsive diseases.

9. Pregnancy, by evoking or producing convulsive diseases, under certain known and passing conditions, puts to the test the various theories of the pathogeny of these diseases.

10. The rational treatment of these diseases in women, must take into account the two great factors in the production of these diseases, viz.:—an exalted nervous irritability under the stimulus of the reproductive function, and lowered or empoisoned conditions of the blood.

Bibliographical Notices.

Observations on the Surgical Treatment of In-growing Toe-nail. By George Stilwell, Surgeon, Epsom. With a pamphlet by Dr. Cotting, Boston, America. London: J. A. Churchill, 1873. Pp. 8.

The proper surgical treatment of in-growing toe-nail, as it is commonly called, has of late attracted more than usual attention; and medical journals, at home and abroad, have recently published many suggestions for the cure of this troublesome complaint. An affection which compels the sufferer to be laid up for days, at irregular and inconveniently frequent intervals; which entirely prevents walking, or permits it with great distress; which deprives the patient of sleep; surely such an affection is worthy of persistent efforts for an effective remedy. Operative treatment in such a case may not possess the brilliant importance of capital surgery, but the gratitude which rewards the successful interference of the surgeon, if less demonstrative than that which follows a lithotomy, is scarcely less real, for to the patient's sense of feeling, the relief is almost beyond description.

The pamphlet of Mr. Stilwell details an operation, for which is claimed an invariable success during a period of forty years. To the author, "the evulsion, or, in plain English, the tearing out of the toe-nail appears both logically and practically bad," and, in its stead, "a comparatively painless operation to remove the offending cause" is proposed. This operation consists in the removal, with the knife, of the whole of the granulations and hypertrophied cellular tissue, after first finding the edge of the nail with a probe, as a guide, it is presumed, for the limit of the incision. This procedure is based rather on the pathology of the disease, than on a definite end in view with regard to the process of healing; for, the author observes, "we must bear in mind that it is not the nail growing into the flesh, but the soft and sensitive surrounding structure growing over the nail;" this latter being taken away, the nail is left to fulfil its natural use as a support and protection.

The paper of Dr. Cotting, originally published in this Journal,* is

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* January 2, 1873. The operation was also described in the same Journal for May 24, 1866.

re-printed by Mr. Stilwell (the cuts, as well as the text, being reproduced), as a confirmation of the theoretical and practical merits of the method above described. On superficial view, the operations, as performed by both these surgeons, would appear to be identical; but a careful comparative reading of the observations here recorded leads us to believe that there are points of difference which are important. Both the authorities operate with the knife—Mr. Stilwell because he wishes to get rid of the offending tissue, Dr. Cotting, because he wishes to do this and *something more*, namely, to make a clean wound which, in the process of healing, shall, by cicatricial contraction, substitute a new and better base of tissue under the edge of the nail, and so prevent the possibility of the subsequent overlapping by any morbid growth. To accomplish this purpose, Dr. Cotting does not limit his incision with the edge of the nail, but he takes away all the granulations, and with them a considerable portion of healthy flesh from either side and below the diseased parts, including, possibly, a segment of the nail itself.

The results which are figured in the pamphlet, and others which have been observed in cases long ago operated on, show very plainly a real loss of tissue at the side of the toe, thereby, we repeat, effectually preventing any overgrowth or overlapping by the soft tissues, or any painful pressure by the edge of the nail.

We observe a single expression in Mr. Stilwell's pamphlet, which appears to indicate that he has latterly taken a hint from Dr. Cotting, either intentionally or otherwise. In the description of the operation published a year ago by Mr. Stilwell, there is nothing to show that he did more with the knife than others tried to do with caustics, namely, to get rid of the fungous growth. He now remarks, "the operation should be sufficiently bold to ensure the full benefit." There is no particularly urgent call for "boldness" when the probe is used to cautiously limit the cut; there is, on the other hand, some demand for that surgical virtue in the free use of the knife, suggested by Dr. Cotting; and perhaps Mr. Stilwell now recognizes, but forgets to explain that the probing is superfluous.

If we mistake not, others, besides Mr. Stilwell, have failed to appreciate the distinctive feature which characterizes the *modus operandi* of the cure claimed by Dr. Cotting, and have mistaken kinship for identity in the various cutting operations.

BOOKS AND PAMPHLETS RECEIVED.

Transactions of the Medical Society of the State of California during the Years 1872 and 1873. Sacramento. 1873. Pp. 252.

Body and Mind, to which are added Psychological Essays. By Henry Maudsley, M.D. London: Macmillan & Co. 1873. Pp. 342. (From A. Williams & Co.)

A Practical Manual of the Diseases of Children, with a Formulary. By Edward Ellis, M.D. Second Edition. Philadelphia: Lindsay & Blakiston. 1873. Pp. 334.

Skin Diseases; their Description, Pathology, Diagnosis and Treatment. By Tilbury Fox, M.D. Lond. Second American from Third London Edition, re-written and enlarged. New York: William Wood & Co. 1873. Pp. 532.

Boston Medical and Surgical Journal.

Boston: Thursday, August 28, 1873.

The new Training School for Nurses, attached to the Massachusetts General Hospital in Boston, whose circular has lately been distributed among some of the physicians of this State, will open about the first of next November, and begin its work by taking charge of certain wards in one of the wings of the hospital. Mrs. Billings, who is known in Boston as an accomplished and faithful nurse, has been appointed superintendent of the school, and has now gone to the Training School attached to Bellevue Hospital in New York, to become familiar with the system of teaching in use there.

There will be attached to each ward, one or two nurses and two or three pupils, according to circumstances. One of the nurses will pass the night in the hospital, ready to be called by the watcher, in case of emergency. Both nurses and pupils will be in the hospital only when actually on duty, a home being provided for them by the school, in a house close to the hospital gate. The whole corps will be under the authority of the Resident Physician and subject to the rules of the hospital.

The school starts under excellent auspices. Generous donations placed in the hands of the committee enable it to undertake the expenses of the first year without anxiety, while several candidates have applied to become pupils. Systematic training is not a new thing in Europe, but it is mainly to the great school connected with St. Thomas's Hospital, in London, that the origin of this school is to be traced. A fund raised as a memorial for the services of Florence Nightingale was, at her request, applied to the foundation of that school, which has now been in operation over twelve years, and has supplied many superintendents and trained nurses to other institutions in various parts of England and the British Provinces. The school in New York, which was the first regularly organized school in the United States, also received its superintendent from England, if not directly from St. Thomas's Hospital. In view of the fact that these institutions have been successful in England, that the value of them is nowhere questioned, it is rather surprising that similar schools have not been introduced here before.

The main points in which the school system of nursing differs from the ordinary system of hospital nursing are these. While there is a head nurse to each ward, all the head nurses are under the direction and supervision of the superintendent of the school, who is responsible to the Resident and Attending physicians for the prompt and careful performance of their orders. The pupils serve as assistant nurses and relieve each other in turn through the day and night, returning to the home when not on duty. In this way, they have an entire change of scene and occupation, and a chance to become more thoroughly refreshed than they could if they lived all the time in the hospital Careful instruction is given on all subjects connected with nursing, including the practical management of splints, trusses and other mechanical apparatus, and also in all kinds of manual manipulation, the practical application of electricity, &c.

A diploma is given after two years' attendance at the school. At the end of the first year the pupils will become nurses, and receive a regular salary. They will still continue to live in the home, and will be employed in the hospital, in private families, or among the poor. It is intended that after graduation the interest of the nurses in the welfare of the school shall be kept up as much as possible, and arrangements will be made by which the home will also serve as a registry and employment office for nurses. We wish the enterprise every possible success.

We notice, in the papers, that the State Constabulary have shown unusual activity of late, and that liquor seizures are becoming more and more frequent. A few days, ago an extensive raid was made on several small proprietors, and liquor was removed amid great excitement, a mob of two thousand at times following the officers. We presume that this activity is in some way connected with the fall political campaign, and yet we cannot read these accounts without a strong feeling of indignation, that a free and civilized community should be subjected to a species of tyranny, for it can be called nothing else, such as the State is now inflicting upon her citizens. It is a well known fact that the best medical authority is in favor of the introduction of cheap light wines and the use of beer as the best means we have at our command to diminish drunkenness. Testimony has not been wanting, either in quantity or quality, and, in the face of it all, we are actually subjected to these daily outrages by a miserable set of pie and bean-fed politicians, who do not appear to be acquainted with even the most common and simple laws of health. The wretched physique of the poorer classes of Americans in the country is evidence enough of this deplorable state of ignorance. We think our country practitioners are much to blame for this state of affairs, and we call upon them to do, as they easily can, a good missionary work on the subject of proper food and drink. As matters stand now, we are making ourselves the laughing stock of the world, and every good physician ought to feel, in part at least, responsible for and ashamed of the liquor law.

In reply to the inquiries of our correspondent in another column, we would say that there are a number of Boston physicians, especially among the younger men, who have made electro-therapeutics a special study, both in this country and under the best teachers in Europe. They are men whose position and abilities inspire the confidence of their brother practitioners, and who are doing their utmost to rescue this specialty from the hands of unscientific men, and to place it in its proper position. We number many of them among our most valued contributors to the Journal. A great deal of good and careful work is now going on in this specialty in all parts of the world, and the value of electricity, as a therapeutic agent, may be said to be slowly but steadily increasing. It will be a long time, however (as we were assured by one of them the other day), before the categorical answer desired by "Rusticus" can be given to patients seeking the specialist's advice. There is, nevertheless, something that is certain and valuable, and if practitioners in general would make themselves more familiar with this therapeutic agent, and find out what it can and what it cannot do, electricity would, we think, become much more popular with the profession than it has been. This can easily be done, for Harvard College now has its "course for graduates," and we recommend "Rusticus" to come to town next term, and take the course on electro-therapeutics.

Health of the Khiva Expedition.—The forethought of the Russian Government in its treatment of its soldiers—"children of the Czar"—is favorably displayed in the admirable medical and hygienic arrangements of the army which marched upon Khiva. In the Turkestan division, comprising two columns (the one of 4,687 and the other of 2,352 men), although it had suffered severely from snow, rain and cold, there were, up to the 15th April, but twenty-five cases of sickness. When we consider the nature of the country through which the troops marched, and the scarcity of water, this immunity from disease appears remarkable. It is due, however, to the sanitary precautions taken, and the rigid supervision exercised in everything pertaining to the health and well-being of the soldiers. Attached to the Turkestan division are fourteen doctors, one veterinary surgeon, one apothecary, and twenty-nine medical assistants (including dressers and dispensers). A certain number of camels are reserved exclusively for the use of the sick and wounded. One noteworthy feature in the dietetic *régime* of the expedition is the substitution of tea for spirituous liquors, the latter being only given when the medical officer considers alcoholic stimulants absolutely necessary. We shall be anxious to know how far this arrangement meets the consent of the men. Whatever its advantages may be, we fear it would prove unpalatable to our own soldiers.—*Lancet.*

Correspondence.

Messrs. Editors,—The name of electricity carries with it an immense deal of power. Being something of which the public knows very little, they use the word very freely, and justly as well as ignorantly attribute great power to it. So they do to magnetism. The latter has great effect upon nervous, lazy, ignorant hypochondriacs, and on no one else.

There are three classes of patients upon whom the electricity has an effect. To one it does good; a second class it injures; the third is the class upon whom the magnetism operates so powerfully, and—so does the last advertised drug, quack or otherwise.

My reason for writing to you is to know who there are in the practice of medicine that you would point out as thoroughly competent electricians? We in the country, as well as our more fortunately situated city brothers, like to try new methods, but we wish to do it in the best way. Here is a woman, who calls herself doctor, and has a box with a battery, which she carries about, administering to all whom she can get to employ her, the most infernal crampings and twistings imaginable. The rule seems to be—the more pain the better you feel afterwards. She came in the way of one of my patients, talked about primary and secondary currents, set the machine going, and within fifteen minutes after was succeeded by an attack of hemiplegia.

Another patient of mine, a gentleman, who, for several months, had been troubled with slight rheumatic pains, after being in Boston a week or two, was induced by some hotel acquaintance to call on one of these *electricians*. The machine was set going, with very considerable pain to my friend, and, on the following day, acute rheumatism in force had him down, and for over seven weeks he was unable to be out of the house.

There are many of the profession who can tell similar stories. Many of us believe that electricity as a medicinal agent may do much to relieve sickness and pain. But we do not know which cases to recommend it in. We have told patients going to the cities to inquire. The result has been that they have fallen into the hands of these ignoramuses, who humbugged them; or into the hands of another, who, if they were female patients, hinted uterine disease, passed the speculum, applied caustic or pretended to, and set up a leucorrhœa to come home with. This has twice been done with virgins, who had never had even a pain in the back, nor a day's irregularity, nor a particle of vaginal discharge. One was a case of sciatica, the result of hip disease when a child; the other was a case of vertigo in a young lady, whose time to menstruate had not yet arrived.

Now, what shall we do? We are very much afraid to trust advertisements, even in medical journals. Can you help us along? Can you point out those who understand the specialty, and who, without prescribing something else and asking them to call again next week, will give the patients information as to whether electricity is likely to be of service; will send us word what, in their opinion, is the true course to pursue; will repress their superior knowledge, which makes them say, "Well, ——, Doctor * * * has done all I should expect *him* to do—but I see very many of these cases," &c. &c.? It is needless to add that Miss . . . . came home worse than she left it, and the electrician has made fifty dollars, and reports the case as a cure. Over three years have passed, and the patient is as bad as ever. I call her case hysteria, consequent upon dyspepsia, consequent upon cake and pie *in loco* beef and mutton. But change of diet does not cure, and I should like to know if properly applied electricity—quantity or intensity not to be talked of to Miss . . . . —will do any service? If she needs the use of the battery, let her have it. I send her to the electrician. He should consider himself in consultation with *me*. I am the one to whom he should give the opinion.

A few words from the Editorial department would help many of us, and none more than Rusticus, M.D.

Medical Miscellany.

THE BRITISH MEDICAL JOURNAL states that two cases of Asiatic cholera were reported in London during the first week of August, one of which proved fatal. They were imported from Hamburg.

"IT costs London a million of dollars, annually, to water her streets."—*Newspapers.* This is about thirty-three cents for each inhabitant. If it were to cost a dollar apiece, it would be more than that gain to every inhabitant in our cities, to have them thoroughly watered.

THE meeting of the British Medical Association proved to be much larger than was expected. Although but six hundred members had entered their names up to the day previous to the meeting, by the evening of the first day two thousand two hundred names had been registered. The opening address was delivered by the President, Sir William Fergusson, on the water supply of London. Dr. E. A. Parkes delivered the address in medicine, Mr. John Wood the address in surgery, Dr. John Burdon Sanderson that in physiology. Numerous other elaborate addresses were delivered, at the opening of the various sections. The financial condition of the Association seems to be eminently satisfactory.

TO BE LEFT TILL CALLED FOR.—A parcel upon which this was written, was found to contain when opened last week at the Euston Square parcels office, the decomposed body of a child, which had been sent from Manchester. Some time back a box similarly addressed to the same office, also from Manchester, contained the mutilated bodies of two infants. There is need for a searching inquiry here ; if such atrocities cannot be stopped by any other means, parcels "to be left till called for" will have to be declined unless properly authenticated by the sender. Of course, the public convenience would suffer by such a restriction, but child murder must be prevented, if possible, at any risk.—*Medical Press and Circular.*

SCHRŒTTER ON MOVEMENTS OF THE TRACHEA.—M. Schrötter has demonstrated to the Academy of Sciences of Vienna that the movement of the trachea and the bronchi observed by the laryngoscope differs in various individuals; sometimes it consists in a brusque displacement from right to left or from left to right at the moment of the cardiac systole; sometimes in an oblique displacement forward or backward; sometimes it is nil or almost nil. These movements he considers to be due to the pulse-tides of the aorta, and the differences to anatomical differences in the relations of the aorta with the neighboring organs. With the aid of the laryngoscope, these differences may therefore be diagnosticated.

MISS JEX BLAKE and others, having been defeated at Edinburgh by the decision of the Court of Session, have applied to the Senatus Academicus, of the University of St. Andrew's, to see what can be done for them. In appeals addressed to that body for the admission of women as students of medicine in the university, they submit their application on the following grounds among others. The most general objection to the admission of women to the university, lies in the supposed difficulty of educating them jointly with male students of medicine. This argument does not hold good in the case of St. Andrew's, as there are here no male students of medicine. A supplementary charter can be obtained if needed, without delay, and they are willing to be responsible for all contingent expenses. They are prepared to hire or build suitable premises for a school, and to arrange for a complete course of lectures, and some fifteen ladies are ready to avail themselves of the permission should the university grant it. It is rumored that the application is viewed favorably. Moreover, we see that Sir D. Weddebrown gave notice in the House of Commons lately, to ask leave to bring in a bill next session to admit women in Scotland to medical degrees, and with power to confer such degrees.

A Caution in Regard to the Unguentum Zinci Oxidi of the new U. S. Pharmacopœia.—Formerly, the unguentum benzoini which forms the base of this ointment was prepared by boiling benzoin in lard. A small quantity only of the benzoin was in this way dissolved, sufficient, however, to obviate the rancidity of the lard. In consequence of the objections made to the mode of preparing it, that the resulting ointment was of a dirty-white color, and deposited a portion of the benzoin when heated, it is directed in the new Pharmacopœia that the ointment shall be made by melting the lard with the tincture of benzoin. By this process, a larger portion of the benzoin is incorporated in the lard, and hence the zinc ointment made with it becomes irritating. In a case in which we had occasion recently to prescribe anew some benzoated zinc ointment, we were surprised to find that it proved highly irritating instead of soothing, as formerly. We were hence led to examine the ointment, and its appearance was so different from that previously used that we inferred the apothecary had made some mistake in its preparation, but we were informed by him that it had been prepared according to the new formula of the U. S. Pharmacopœia.

We call attention to this, because the use of the officinal ointment in the instance referred to caused great suffering, and if the experience of other practitioners should be in conformity with ours, it will be prudent to abandon the new formula.—*Medical News and Library.*

I am glad to see that one publishing firm has had the good sense to advertise in your Journal, as suggested a few numbers since. It is to be hoped that they will meet their reward in so doing. The book they advertise contains scenes which are "among the most exquisite pieces of art." The translation, "very well done," is said to be by the wife of one of our well-known physicians. Lex.

Messrs. Editors,—Among your large circle of readers there must be doctors in the country who have had much surgical experience, and could give their younger brethren valuable information on the subject of apparatus they have been called on to use for fracture, when the classical splints, as laid down in the books for such cases, were not at hand. Any man, of course, can exercise his ingenuity, but all men are not equally ingenious, and a clear description of the most practicable forms of improvised apparatus in common fractures would be very serviceable.

Erratum.—Page 103, 8th and 17th lines, and in the foot-note, for "Rothroch" read *Rothrock.*

Mortality in Massachusetts.—*Deaths in fifteen Cities and Towns for the week ending August* 16, 1873.

Boston, 197—Charlestown, 28—Worcester, 29—Lowell, 34—Chelsea, 9—Cambridge, 19—Salem, 17—Springfield, 14—Lynn, 21—Fitchburg, 6—Newburyport, 6—Somerville, 12—Fall River, 32—Haverhill, 8—Holyoke, 13. Total, 445.

Prevalent Diseases.—Cholera infantum, 134—consumption, 54—dysentery and diarrhœa, 25—scarlet fever, 16.

Four deaths from smallpox occurred in Holyoke and one in Springfield.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, August 23d, 153. Males, 93; females, 60. Accident, 6—inflammation of the bowels, 3—disease of the bladder, 1—bronchitis, 3—congestion of the brain, 3—disease of the brain, 5—chlorosis, 1—cerebro-spinal meningitis, 5—cancer, 1—cholera infantum, 46—cholera morbus, 4—consumption, 18—convulsions, 3—debility, 2—diarrhœa, 10—dropsy of the brain, 2—dysentery, 1—exhaustion, 1—scarlet fever, 3—typhoid fever, 5—gangrene, 1—gastritis, 1—disease of the heart, 2—disease of the kidneys, 1—disease of the liver, 1—congestion of the lungs, 2—inflammation of the lungs, 2—marasmus, 4—measles, 1—old age, 4—paralysis, 4—parotis, 1—puerperal disease, 1—scrofula, 1—tumor, 1—ulcers of the stomach, 1—unknown, 2.

Under 5 years of age, 87—between 5 and 20 years, 6—between 20 and 40 years, 19—between 40 and 60 years, 19—over 60 years, 22. Born in the United States, 108—Ireland, 32—other places, 13.

THE
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Original Communications.

ON THE SMALLPOX EPIDEMIC IN BOSTON, IN 1872–73.

Read before the Massachusetts Medical Society, June 3, 1873.

By M. E. WEBB, M.D. Bowd., of Boston.

[Concluded from p. 205.]

THE remarkable intensity of the variolous poison was still farther attested by the unprecedented number of recurrent cases; the writer personally witnessed thirty-eight cases, which presented scars of former recoveries; three of these had the disease twice within three months. The following notes are introduced to illustrate this interesting feature of the epidemic.

Mrs. M. F., aged 39, married, had smallpox twelve weeks ago, and was treated by Dr. White. Diagnosis verified by Dr. Green. Case not removed, and several cases resulted in the same house, receiving the contagion from her; two of these came to the hospital for treatment.

On Sunday, Sept. 22, she was delivered of a dead fœtus, at the eighth month of pregnancy; hæmorrhage not excessive, but there was great exhaustion.

On the Tuesday following, an eruption appeared. Dr. Street, her physician at this time, reported it as a case of smallpox. On the afternoon of the same day, I saw the case with Dr. Green. There was an eruption over the entire body, with, here and there, thickly accumulated patches, especially upon the abdomen, besides several large blebs filled with bloody serum, the whole surface presenting a lobster red appearance. Uterine hæmorrhage small, but exhaustion extreme; frequent collapse on movement; great dyspnœa; pulse rapid and feeble; tongue dry. The symptoms indicated immediate dissolution.

The cicatrices of the first attack were faint, on account of the erythema; but they were perceptible.

She was attended, both times, by the same woman, an old, experienced smallpox nurse, who was greatly surprised on being called upon, the second time, to attend the same patient for the same disease.

Since the publication, last year, in this JOURNAL,* of a case of recurrent smallpox, another one has come to my knowledge, having some connection with the case published.

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* See Journal of June 6th, 1872.

E. M., aged 4, was taken sick, March 22d, 1872. The mother of this child was very intimate with the mother of the child above referred to as previously reported; she had visited and had even held E. M. in her lap, when her own child was sick at home with the first attack of variola. On the 25th, an eruption appeared, just three days after the primary symptoms. Dr. Granger, the family physician, was called, and pronounced it smallpox and reported it as such.

Dr. Green, City Physician, saw the case and examined it carefully, and had no doubt that the diagnosis was correct. The child recovered, and enjoyed good health during the summer.

October 24th, the child was again taken sick, and in two days an eruption appeared. Dr. Granger was again called, and again diagnosticated smallpox and reported it.

Dr. Green saw the child on October 31st, and informed me of the case, saying that he recalled the circumstances of the first attack, the preceding March. I saw the case November 4th, and certainly there was no doubt this time, as the child was *in articulo mortis,* with confluent smallpox.

This child had been vaccinated when very young, and the mother said had a very sore arm, but, of course, no cicatrices were visible.

In addition to these cases, I have also seen three instances with the third attack, and have full records of two cases with evidence sufficient to prove the fact, one having two good marks of vaccination performed before either attack; the other, one fair mark. The history of the one having two marks is as follows:—

Mrs. N. D., aged 24, married, native of Dover, N. H.; when not quite a year old, her sister had smallpox, and she, with her mother, took the disease, in a light form, and was removed to the pest-house in Dover. She had been previously vaccinated, and to this day shows two fair cicatrices.

At the age of 14, while attending school in Manchester, N. H., she had the second attack. The prodromata were quite severe, but she kept up as long as possible in order not to lose her place in her class. She was finally obliged to keep her room, and a Dr. French was called in. He pronounced it smallpox. There were, at that time, a few sporadic cases there. She had varicella in the interval, and shows some few marks, beside two sets of scars undoubtedly variolous.

I saw the patient December 24, 1872, and she was then suffering from the discrete form of the disease; the eruption was in the pustular stage and was commencing to desquamate upon the face, it being then the seventh day of the eruption. The primary fever was high, with severe head-ache, back-ache, &c.

This case was one of uncomplicated variola discreta, but it was much more severe than the previous attacks. I have seen this patient since her recovery, and she is considerably marked from the last attack.

For further details, I am obliged to rely on the figures of the three hospitals within the city limits.

Of those treated, about sixty per cent. were American born, fifteen per cent. were from the British Provinces, fifteen per cent. were from Ireland, and ten per cent. were from other parts of the world, the death-rate being in about the same proportion.

Again, the highest death-rate was in the male sex.

Number of males treated, 538.
Number of deaths, 127.
Percent. of mortality, 23·60.
Number of females treated, 180.
Number of deaths, 58.
Percent. of mortality, 18·83.

As might be expected, the death-rate was exceedingly large among the unvaccinated.

Number of unvaccinated, 113.
Number of deaths, 55.
Percent. of mortality, 48·76,

or nearly one half.

Number of vaccinated, 690.
Number of deaths, 130.
Percent. of mortality, 19·55,

or 29·21 per cent. less than death-rate among the unvaccinated.

Number of re-vaccinated, 84.
Number of deaths, 15.
Percent. of mortality, 17·85,

or 1·70 per cent. less than under head of vaccinated.

For the purpose of showing the value of the vaccine scar, we subjoin the following statistics:—

Number having one (1) scar, 413.
Number of deaths, 52.
Percent. of mortality, 12·06.
Number having two (2) scars, 103.
Number of deaths, 8.
Percent. of mortality, 7·76,

or 4·30 per cent. less than those having only one cicatrix.

Number having three (3) scars, 36.
Number of deaths, 0.
Number having four (4) scars, 3.
Number of deaths, 0.
Number having five (5) scars, 3.
Number of deaths, 2.

One of these had five marks from primary vaccination, and had a discrete form of the disease, and recovered. The other two had three marks from primary vaccination, and two from re-vaccination within three years—both had the hæmorrhagic form, and both died.

One patient had six marks, three primary and three secondary, the result of re-vaccination last November. One had eight good marks, which he had borne from infancy. These last two had the disease in a mild form, and made good recoveries.

So many theories have been advanced in relation to the subject of vaccination, that absolute truth is reached with difficulty. That it is the only preventive known, and that it is one of the grandest advances ever made in medical science, in saving life and preventing human suffering, all acknowledge; that it has done so in the late epidemic is satisfactorily proved by the records. Allowing this and even more, that it is far better to protect than previous attacks of smallpox, it has not proved an entire safeguard. The many cases of recurrent smallpox, including some instances of young children previously vaccinated and re-vaccinated, certainly point to the conclusion that there are persons so susceptible to the influence of variolous poison that no amount of vaccination or previous attacks would prevent the disease, if these persons were exposed to the contagion.

Regarding the scar, we have hesitated to make a favorable prognosis upon that alone, in the earlier stages, whether the patient had or had not one or two or even five good, fair or poor marks upon the arm; and the fact that physicians and nurses who have constantly been exposed to the contagion, and in two instances under my own observation have been inoculated with the virus upon abrasions of the hand, while they showed no trace of a vaccine cicatrix, yet have not suffered from the disease, is certainly strong evidence that vaccination may protect without any external mark whatever.

A valuable paper, read by Dr. B. E. Cotting before the Boston Society for Medical Improvement, and published in this JOURNAL, April 25th, 1872, seems to prove this fact conclusively. In the experiments, under his instruction, by Dr. J. H. Davenport, of this city, a new method was devised and performed for the sole purpose of proving that a person could be successfully vaccinated without the vaccination in the least showing itself, or leaving a trace upon the external surface. The lymph was inserted into the arm by means of a hypodermic syringe with a long needle, and was carried underneath the skin as far as possible from the point of puncture, in order that external pock might be prevented, and, consequently, protection gained without a scar. His procedure is wholly different from that of Clemens and others in Germany, whose object was merely to deposit the lymph in the cellular tissues directly under the wound, with the expectation that pock would form externally around the puncture, as actually occurred whenever their operation was successful.

Re-vaccination has been extensively performed, and has, no doubt, saved many who otherwise might have had the disease. While, in epidemics, this may be imperative, the view that it should be done every three or five years, should be received with hesitation. If properly done in infancy, and at least faithfully attempted again after puberty, it ought to be sufficient, except, perhaps, in epidemics, or among people living in tenement houses where the disease exists; in these conditions, re-vaccination should be performed whether one, three, or five years had intervened since the last introduction of vaccinia.

Both animal and humanized virus have been used, but there are no data to lead to correct conclusions as to the relative protective value of the two. For my own part, I am fully committed to the use of animal virus, for the reason, in the first place, that there is no danger of introducing syphilis or other diseases, a danger which does undoubtedly occur, though not so frequently as many suppose; and, secondly, because I consider its protective power greater. I have yet to see the first case of variola, in any form, among the thousands that have been vaccinated with what was known to be animal virus, including over eight hundred cases in my own practice where this has been used. The nearest approach to it is the fact that several cases have been noted where the disease existed, and was attributed to the bad pock used, or in other words, to inoculation with variola, the eruption making its appearance on the eleventh or twelfth day after vaccination. These are not true instances, for the reason that these cases were seen generally upon the fourth day of the disease and were probably vaccinated two or four days after receiving variolous contagion, and, under those circumstances, we should not expect to do more than modify the progress of the variola.

For complications, beside those commonly seen, we have observed two conditions not referred to by authors in treatises upon smallpox.

In females, if the disease has been in any way severe, they have menstruated invariably during the primary fever; in girls, the first menstrual period came on, and in people near the climacteric, the catamenia appeared, when perhaps menstruation had been delayed for one year. So common has this been, that a diagnosis has been made upon this fact alone, that there was a flow of blood from the uterus occurring out of the regular time for the menstrual epoch. In some way, the poison seems to affect the uterus, and to exert a special action upon its functions.

In several cases, and always where the disease has been mild, and had passed regularly into the desquamative stage, suddenly, without a warning, or a perceptible cause, patients would have convulsions—inflammation of the brain or spinal cord—followed by paralysis, either complete or partial, and death in twenty-four or forty-eight hours. In three instances, paralysis commenced in one leg, then the arm of the same side was affected; then the other leg and arm; then complete paralysis; the mind of the patient remaining clear to the last.

There were two cases that had paralysis without the first symptom of inflammation and both these died. An examination of the urine in these cases disclosed the fact that it was heavily loaded with albumen. No microscopical examination was made. This might have thrown some light upon this peculiar manifestation, as Bright's disease was suspected.

All the cases, some eight in number, that we have seen, proved fatal.*

Treatment.—We will premise the discussion of treatment by giving a table of mortality-rates in the different places where the disease has been treated.

In the Albany Street hospital, which was open six months, the
Number of cases treated was 322.
Number of deaths was 76.
Per cent. of mortality, 23·60,
or nearly four per cent. less than the general average.

The highest mortality rate was at Galloupe's Island; here the
Number treated was 487.
Number of deaths, 182.
Per cent. of mortality, 39·59,
or nearly forty per cent., 15·99 per cent. larger than at the old Albany Street hospital.

The next largest death-rate was among those not removed.
Number treated at their own homes, 2,342.
Number of deaths, 659.
Per cent. of mortality, 27·09.

This is 12·5 per cent. less than that at the Island; yet the Albany Street hospital had an advantage of 3.5 per cent. over this.

At Hospital No. 1, (Swett Street),
Number treated, 233.
Number of deaths, 49.
Per cent. of mortality, 21·02,
or 18·57 per cent. less than at the Island,
7·07 " " " " among those not removed.
2.58 " " " " at the Albany Street hospital.

The lowest rate was at the Marcella Street hospital, or the old Roxbury Almshouse.
Number treated, 300.
Number of deaths, 60.
Per cent. of mortality, 20·00,
or 1·02 per cent. less than at the Swett Street hospital.
3·55 " " " " " " Albany Street hospital.

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* See reports of similar cases in this Journal, May 8th, May 22d and Aug. 7th, 1873.

7.04 per cent. less than among those not removed.
19·54 " " " " at the Island.

Allowing that the city had possessed a hospital like this latter at the commencement of the epidemic, and that all the cases had been treated there, we find that one hundred and ninety human lives might have been saved in this way alone. In comparison with the death-rate at the Island, we find that eighty-five lives might have been saved, that died after transportation there. By these figures, it is evident that removal to a good hospital, on main land, is far better, for mortality rates, than allowing patients to remain at home; and the better the hospital, the less the percentage of deaths.

First, then, in the matter of treatment, is a hospital located where the land is high, dry and healthful, with high rooms, properly warmed, and ventilated, and sufficiently numerous to enable proper classification of the cases; they should be supplied with every convenience which modern science has invented that will add to the comfort and happiness of its inmates. The surroundings should be pleasant, so that patients can feel that, instead of a "pest-house," they have a home, where the most delicate and sensitive can be so separated from the wards, that they will not be continually shocked by scenes of suffering and of death. Having such an institution, well supplied with watchful and attentive nurses, both night and day, full preparation is made for a hand-to-hand conflict with the disease.

Most of the patients are in the second stage, or that of the eruption, on admission, and require before the eighth day little or no treatment, except perhaps an opiate at night (as sleep is of great importance), and some mild laxative to keep the bowels in soluble condition. In the discrete form, this has been all the treatment required, guarding patients against the ravenous appetite they always have while convalescing. In the severer forms, we have, in addition, given quinine early, and through every stage of the disease, thus keeping the temperature low, and harboring strength for the suppurative stage. During the secondary fever, quinine in large doses, governed by the temperature, milk-punch, brandy, beef tea, and opiates (generally sulphate of morphia) were given freely. It has been sometimes surprising to see the rapid change of a patient, for the better, under the administration of five or even ten grains of quinine every four hours, and $\frac{1}{4}$ grain of morphia, as often; and instead of the high temperature, 105° to 107°, the rapid breathing, and the delirium, we would have a temperature of 100° or 101°, dyspnœa lessened, sleep produced; and our patient, having a new lease of life, would go on to convalescence and recovery. Patients have never been without milk, and have taken it ad libitum. Grapes, oranges, apples, and other fruit have been rationed out daily in all stages of the disease.

In the hæmorrhagic form, the same course has been followed, with the addition of ergot, muriated tincture of iron, tannic acid and other astringents; but none of these have been of benefit.

Complications of the disease were treated upon general principles, never forgetting that the vital powers must be sustained.

Ulcerations of the cornea were treated by frequent cleansing of the eyes, application of weak astringent lotions, and keeping the pupils well dilated with atropine. Delirium, in the third stage, we considered as a cry of debilitated nature for support, and milk punch and beef-tea were urged more heroically.

To prevent pitting, an all important matter, various methods have been advised, many experiments made, and all with doubtful success. If the ulcerations extend deeply into the skin, nothing will prevent cicatrices remaining. Puncturing the vesicles, applying iodine, nitrate of silver, poultices, collodion, excluding the light by darkening the room, excluding the air by covering the face, have only succeeded in making our patient more uncomfortable, if possible, without preventing disfiguration; and latterly, were sorted only to emollient applications, and to frequent sponging with tepid water.

Our hospital solution to prevent itching was composed of carbolic acid, ʒ ij.; olive oil, glycerine, in equal parts, ℥ ij. This was applied with a soft brush.

In the three hospitals under our charge, we have used all kinds of disinfectants that are in the market, but as carbolic acid has proved the best in destroying all odors, we came, at last, to use no other. We sprinkled our wards with the solution, and our beds and bedding with the powder, made by rubbing up the acid with carbonate of magnesia; our earth and water closets were kept free of all odor by the lavish use of carbolic earth.

Bromo-chloralum has the advantage of being nearly odorless, and in private rooms where there was only one patient answered every purpose, but in wards is far inferior to carbolic acid.

The fumigation of houses, bedding, clothing, &c., has been performed by burning sulphur, and thoroughly saturating them with the fumes of sulphurous acid. This has been the only method used at the hospitals to disinfect clothing, and from the many patients that we have been obliged to send out with a portion of their garments worn in the hospital, not a case has resulted to my knowledge. Baking, or subjecting the cloth to a high temperature, has not been used here, but is no doubt an easy and efficient method.

In closing this report, I would remark that the great importance of every city and town of any size having a permanent and well organized hospital always at hand for any emergency cannot be too strongly urged upon the profession; for, much as I value vaccination, I consider isolation in times of an epidemic far better.*

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* Dr. Robert H. Blakewell, in his monograph on "Smallpox in Trinidad," remarks:—
"I fear that in some instances wholesale vaccination and re-vaccination at the commencement of an epidemic, has spread smallpox among those who remained unvaccinated. At least it happened, curiously enough, that in the best vaccinated districts in Trinidad, there

A good hospital maintained for five years at an expense of five or even ten thousand dollars a year, without a patient, would be economy as a safeguard for times of need.

If the past epidemic teaches anything, it is not only the importance of having a board of health with special qualifications for that position, unbiased by political trickery or party influence, but the absolute necessity of having an established hospital for contagious diseases, within city limits and easy of access, where the sick poor can have the comforts of home. If Boston had had such a hospital, or had even availed herself one year ago, as later she was obliged to do, of the Roxbury almshouse, she never would have been scourged by the late epidemic, which has cost over one thousand lives, incurred directly an expense to be counted by hundreds of thousands of dollars, to say nothing of consequential damages to business, or of the anxiety of every household which dollars and cents cannot express; she might have saved herself the standing reproach of hundreds of municipalities not only in this state, but all over New England, which have suffered from this disease, and which trace the source of the contagion directly to the carelessness and neglect of Boston alone.

1282 *Washington St.*, June, 1873.

TREATMENT OF NÆVI.—In a recent discussion before the Clinical Society of London, the President, Mr. Prescott Hewett, observed that it was often a matter of difficulty to know when and when not to remove nævus. A large number might be safely left alone until they began to grow. They not infrequently die out. He referred to the case of his own son, who was, as a child, the subject of a nævus of the size of a walnut on the forehead. It did not increase up to the age of four years, when he had an attack of hooping-cough, during which the nævus disappeared.

Mr. John Croft referred to a case in which a nævus gradually disappeared. Whenever a white spot indicating atrophy was observed upon the nævus he advised it to be left alone. In others, enucleation was, he thought, often the quickest mode of treatment.

Mr. Barwell was of opinion that cutaneous nævi before puberty generally disappeared, and often, also, subcutaneous ones. Deeper ones, as a rule, however, did not spontaneously cease to exist.—*Med. Times and Gazette*, June 14, 1873.

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was the most smallpox. One gentleman, Mr. Robert Knaggs, reported that his district of the town was so well vaccinated in the house-to-house vaccination, 'that an epidemic was impossible.' A few weeks afterward, he had to resign that very district, because the number of cases of smallpox was so large that he was unable to attend on them. A very out-of-the-way district in a distant part of the island was entirely free from smallpox, until an energetic vaccinator, newly appointed, vaccinated upwards of a hundred in the course of three or four weeks. Smallpox then broke out. Certainly, smallpox spread with amazing rapidity in the Port of Spain after the house-to-house vaccination had been a short time in operation. It seems clear to me, that if you vaccinate five or six persons in a small hut, in five or six places each, you will have, at the end of a fortnight, a number of scabs equal to a mild attack of discrete smallpox, and that an unprotected person, living in such a house, will be liable to contract smallpox from these cases."

Progress in Medicine.

REPORT ON ANATOMY.

By Thomas Dwight, Jr., M.D.

Methods.

There is but little to record under this head. Exner's admirable little manual for microscopical preparation, has been noticed in this Journal (May 15th), and the review of Sanderson's Hand-book for the Physiological Laboratory will appear shortly. Mr. Needham writes in the *Monthly Microscopical Journal* for June, on methods of cutting sections, and Mr. Atkinson, in the same Journal for July, on the preparation of the brain and spinal cord for microscopical examination; neither, however, gives much that is new or original.

The *Quarterly Journal of Microscopical Science*, for July, contains a paper by David J. Hamilton, describing an apparatus which he has invented, for injecting by air-pressure, and which he considers an improvement on Ludwig's. The latter is very simple, consisting of a large receiver with a small neck which is connected by tubes with a water pipe on one side, and a small bottle holding the injecting fluid on the other. The latter is, in turn, connected by a pipe and fine nozzle to the object to be injected. By permitting the water to flow into the first receiver, the air is forced into the second, compresses the fluid and expels it through the escape pipe. Mr. Hamilton's apparatus is on the same principle; the power is obtained by tightening bands around an air bag, and it permits two fluids to be injected at once. There is also an arrangement for keeping the fluids and the specimen warm, if desired. This must be more expensive, but, except in convenience, not superior to Ludwig's apparatus, which can be easily modified, so as to accomplish as much as the other.

Anomalies.

The great attention given of late to anomalies, has brought them to light in such numbers, that it is impossible to mention any but the most important. Gruber describes *(Bulletins of the Academy of St. Petersburg,* vol. 18, No. 2) the fourth case he has observed of an additional carpal bone resulting from the subdivision of the scaphoid. Prof. Humphry's lecture on The Varieties in the Muscles of Man *(Brit. Med. Journal,* June & July), delivered before the Royal College of Surgeons on June 2d, 4th and 6th are, in some sort, a continuation of those on myology, given the year before. He then discussed the general laws regulating the arrangement of muscles, and now he considers the causes of exceptions. He finds little to support the view that variations are advantageous to their possessor; but, on the contrary, that those muscles are most frequently absent or modified, which can be most easily spared. The cause of these anomalies, appears to be an excess or a defect of segmentation. The lectures reviewed the chief variations in each part of the body, discussing their signification, and, finally, alluded briefly to several interesting questions which the subject suggested. He holds that the distribution of nerves to abnormal muscles, is too uncertain to be a safe guide to their homologies.

Some very interesting cases of deficiency of important muscles have been published by other observers. Dr. Yeo exhibited at the Clinical Society of London, Feb. 28th, an individual with complete absence of the pectoralis minor and of much of the sternal portion of the pectoralis major. The clavicular portion of the latter, and the latissimus dorsi were much hypertrophied. Prof. Drachmann *(Journal of Anat. & Phys.*, June, 1873) describes a case of congenital absence of the quadriceps extensor cruris in both legs, observed during life, on a woman of twenty-eight. The patellæ were present; they were small and movable, and apparently quite unattached to the tibiæ. Gruber *(loc. cit.)* reports a case of absence of the inguinal portion of the external oblique. The lower border of the muscle passed from just above the anterior superior spine of the ilium to a point in the linea alba, about five inches above the pubes. He describes many other muscular anomalies, of which one of the most curious is a tensor fasciæ suralis coming as usual from the semi-tendinosus, which it left in the upper part of the thigh. It soon became tendinous, and ran in a separate sheath to near the head of the tibia, where it became superficial to the deep fascia. Keeping in the middle of the back of the leg, it ended by expanding into the posterior part of the sheath of the tendo-Achillis. Dr. Curnon reports, in the last number of the *Journal of Anatomy and Physiology*, a remarkable variation in the external rectus of the eye, which had two extra bellies arising in common with its lower head. "The inner and shorter slip was inserted into the outer half of the cartilage of the lower eyelid, where it joined the larger and external slip, which was inserted into the periosteum of the outer wall of the orbit, as well as into the cartilage." We would suggest that the abnormal heads may be hypertrophies of the fibres sent to the septum orbitale.

The most noteworthy of the anomalies observed in the arterial system, are those described by Hillary in the *Canada Lancet*, for May. The axillary artery of both sides, divided at its second part into two trunks. The anterior divided near the elbow into the radial and ulnar; the posterior, on one side the larger of the two, supplied the upper arm and finally became the interosseous.

The reader will find accounts of various anomalies in the *Archives Neënderlaises*, vol. 7, part 5, and in the *Lyon Médical*, of March 30, 1873. The muscular anomalies observed in the dissecting rooms at King's College, London, during the sessions of '68–'9, '69–'70 and '70–71 have been collected by Mr. Perrin, and appear at intervals in the *Medical Times and Gazette*. The first of the series appeared Dec. 7, 1872. The last report of Guy's Hospital, that for 1872–3, contains a list of the anomalies observed in the dissecting room, from October 1870 to June 1872, by Davies Colley, F. Taylor and B. N. Dalton. Dr. J. J. Charles gives some notes of abnormal arrangement of the arteries of the arm, in the June number of the *Journal of Anatomy and Physiology*.

Osteology.

Two temporal ridges of the human skull have been described by Hyrtl in the thirty-second volume of the Memoirs of the Academy of Vienna. Till now, but one has been known, and is usually considered as showing the line of origin of the temporal muscle; though, as our author points out, its course would necessitate astonishing variations of the latter. He finds that there are usually two more or less perfect lines, the lower indicating the origin of the temporal muscle, the upper marking the boundary between the superior, or parietal, and the lateral, or temporal regions. The superior varies in position (being nearer the sagittal suture in narrow skulls, and further from it in round ones) far more than the lower, but is usually better marked and more rarely absent. Occasionally, but one is found, and very rarely both are wanting. The inferior ridge starts from the outer side of the external angular process of the frontal, runs backward across the lower part of the parietal, describing a curve with the convexity upward, but before reaching the back of the bone it turns forward and ends in the posterior root of the zygoma. *It does not touch the lambdoidal suture.* The superior line begins at the same point but runs higher on the side of the head, and finally strikes the lambdoidal suture.

Prof. Wenzel Gruber writes in *Du Bois Reymonds' Archiv,* 1872, Heft 6, on the position of the mental foramen. Finding it variously stated by different authorities, and thinking it possible that it might vary in different races, he examined 162 Russian heads. He found it most frequently below the second bicuspid, but, almost as often, below the septum, between the first and second bicuspids. In a series of over 1200 lower jaws he found it wanting but once, and then only on one side. It very rarely was double or triple.

Prof. Struthers *(London Lancet,* Feb. 15, 1873*)* reports a case tending to show that the supra-condyloid process of the humerus is an hereditary anomaly. The father of seven children had it on the left arm; three of the children had it on one side, and one on both. It is stated that unless very small, the process can be easily felt during life.

Dr. H. v. Jhering, in *Du Bois Reymond's Archiv,* 1872, heft 6, describes six centres of ossification for the frontal bone besides the two familiar ones. Of the new ones, two are in the nasal spine, one near the trochlear depression in the frontal plate of each side, and a more important one is in the external angle of each side.

The origin of the normal curves of the human spine is the subject of an excellent paper in Virchow's *Archives,* vol. 57, parts third and fourth, by Dr. Balandin of St. Petersburg. He gives a very interesting historical account of the state of the question, but does not appear to be acquainted with Bouland's paper, of which there is an abstract in our first report on anatomy (Sept. 1872). Not only are the causes of the curves matters of doubt, but also the time of their appearance. Our author made ligamentous preparations of the spinal column and thorax of fœtuses, children and adults on which he studied the curves and then tested their stability by stretching the specimen as much as possible without injury. He found that the column of embryos of from two to three months presented a general curve which could be obliterated by extension. At from four to five months the curve had a longer radius, and on traction a concavity remained from about the seventh cervical to about the ninth dorsal vertebra. In older fœtuses the results were similar, the cervical and lumbar regions becoming straight under traction, but the dorsal curve being more marked. When the child is about three months old the normal curve in the neck is first observed. It quickly consolidates so as not to admit of straightening. At this age the lumbar region is normally straight; the curve does not appear till the beginning of the second year. The two superior curves become rapidly more and more stable, but the lumbar one may be straightened even to the twentieth year, and is not firm till growth is complete.

In considering the cause of the curves, the author devotes himself almost exclusively to the cervical and lumbar regions, expressing the opinion that the dorsal curve is the result of the confining influence of the walls of the thorax and of the pressure from the growth of the viscera which they enclose. The other curves may be said to be caused by an extension or straightening of the body. In the fœtus *in utero*, the head and the legs are bent forwards, and it is necessary that they should both be brought back before the upright position can be maintained. The child begins to raise its chin from its breast during the third month, and it is in consequence of this that the cervical curve is formed by the spine bending forward to support the head. The cause of the lumbar curves requires a longer discussion, as the writer presents some quite original views. He first calls attention to the position which the body of a fœtus, or of a very young child, assumes when laid on its back. The lumbar spinous processes rest on the table in a line with the dorsal ones, and the legs are rotated strongly outward, with the knees usually not touching the table. If the knees be brought together, they at once spring up further from the table, so that the thighs form a well-marked angle with the body. Now, if the knees, still kept together, be pressed down till they rest upon the table, the abdomen will become prominent and the spinal column will bend forward in the lumbar region. The same thing occurs after the removal of the muscles and viscera, and can be shown to depend on the shortness of the ilio-femoral ligaments. As the child learns to stand and to walk, and, finally, to be habitually on its feet, this force comes more and more into play, increasing the obliquity of the pelvis and the lumbar curve. Balandin regards as untrustworthy the measurements showing that any of the vertebral curves are due to difference in thickness of the anterior and posterior bodies of the vertebræ.

MYOLOGY.

The Structure of Striated Muscular Fibre.—Papers on this subject will be found in *Schultze's Archiv*, vol. 8, heft. 2, and vol. 9, heft. 2, by Merkel; in *Pflüger's Archiv*, vol. 7, heft 1 and vol. 7, heft 2 and 3, by Engelmann; in *Reichert and Du Bois-Reymond's Journal*, 1872, parts 5 and 6, by Sachs; and in the *Proceedings of the Royal Society of London*, April 3d, 1873, by Schäfer.

It seems desirable to attempt a general statement of the progress making towards the solution of this vexed question. Obscure as many points in it are, and diverse as are the chief views, there is reason to hope that, ere long, at least the outlines of a theory will be generally accepted. It should be remembered that the above-mentioned observers have all studied the muscles of invertebrates, and that it is by no means settled how much the muscular fibre may differ in the various groups of the animal kingdom.

According to Merkel, the fibre consists of two kinds of muscular substance proper, enclosed in a sheath of most delicate membrane, from which come transverse partitions, dividing the fibre into *elements*, each of which consists of two chambers placed end to end. By way of illustration, let each element be represented by a fig-box or "drum," divided into an upper and lower part by a central partition. Now a pile of such boxes would (if transparent) present transverse divisions of two kinds: one a *middle-plate,* the partition in the middle of each box, and one an *end-plate* at the point of contact of two boxes. Such is the frame-work which we will suppose to be filled by two substances, one dark and one light, both being in each chamber in about equal quantities. When the muscle is at rest, the dark substance in each chamber is placed against the middle-plate and the light against the end-plate; thus a fibre presents alternate dark and light bands; in the middle of each of the latter is a dark stripe, the end-plate or surface of junction of two muscular elements, while in the middle of the dark band is a lighter stripe, the middle-plate, the central partition of an element. The polariscope shows that the light bands are singly and the dark doubly refractive. Engelmann has the same general idea of the framework, but is able, with high powers, to resolve into three the dark line in the white band. Sachs agrees in this with Engelman, but does not admit the existence of a middle-plate.

So far, there are no glaring discrepancies between the views, but they appear when we come to the phenomena of contraction. These writers agree, further, that the dark substance is the contractile element, and is of greater density than the light; that, at a certain moderate degree of contraction, the stripes usually disappear, and the fibre appears homogeneous; and that, at full contraction, the white stripes are proportionally broader and the dark proportionally narrower than when at rest. According to Merkel, there is, during contraction, an intimate mixing of the substances in each element, causing the homogeneous appearance just mentioned, but towards the end of the act they disengage themselves and change places, the dark or doubly refracting substance accumulating on each side of the end-plates, the light going to the middle-plate. This occurs by the absorption of fluid from the light to the dark at the beginning of the act, and its return towards the end of it. Sachs is nearly of the same opinion, but Engelmann denies entirely that the substances change places. He holds that the fluid passes from the light to the dark, making the former darker and the latter lighter, except at its centre. Both parties claim that these views are confirmed by the appearances observed with polarized light. As to the subdivision of the primitive fibre into longitudinal fibrillæ, there is great doubt whether the latter are not merely *post-mortem* changes or the effects of re-agents.

The views of Mr. E. A. Schäfer, presented before the Royal Society last April, are entirely different from any of the above. According to him, voluntary muscular fibre consists of a homogeneous ground substance, in which very small bodies called muscle-rods are imbedded in transverse rows, the long axis of each rod being parallel with that of the muscle. Each muscle-rod has the shape of a minute dumb-bell, with globular heads, which are small in proportion to the shaft. When the fibre is moderately contracted, the dark band corresponds to the handles of the dumb-bells, and the light band to the opposed heads of those in two neighboring rows. There is, in the middle of the light band, a transverse row of dark dots, caused by the heads of the rods, while the light band is caused by the light they throw off. If the fibre be slightly stretched, the line of dots appears double. When the fibre is in complete relaxation, the ends of the rods are so small that they do not project from the shafts; in fact, cannot be distinguished from the latter, and the striped appearance is gone. Nothing can be distinguished beyond a vague longitudinal striation. This state is apparently the same that Merkel and others ascribe to partial contraction. According to Schäfer, when the fibre contracts, the heads of the rods enlarge, press against one another, and encroach on the shafts. Owing to the increased refraction of the heads, the dark band disappears; but, owing to their crowding together, the row of dots is changed into a dark line. The polariscope shows that the ground substance is doubly and the rods singly refractive. The author's theory is, that the ground substance is the contractile element, and that the rods are simply elastic to restore the contracted fibre to its original shape.

Bibliographical Notices.

The Mechanism of the Vesicles of the Ear, and the Membrana Tympani. By H. Helmholtz, Professor of Physiology in the University of Berlin, Prussia. Translated by Albebt H. Buck and Normand Smith, of New York. New York: William Wood & Co.

This work of the distinguished German physicist, which first appeared in *Pflüger's Archiv für Physiologie*, in 1869, attempts to solve the physiological and mathematical questions which are involved in the transmission of sound through the conducting apparatus of the ear, and, ever since its appearance, has been accepted as the highest authority on that subject. The name of Helmholtz alone was sufficient to insure it a favorable reception, but clinical experience is daily confirming many of the views therein advanced, and to him will probably belong the credit of establishing a substantial basis to operative otology.

The book is divided into eight sections, viz.: 1st. Results due to the small dimensions of the auditory apparatus. 2nd. Anatomy of the membrana tympani. 3d. Attachments of the hammer. 4th. Attachments of the anvil. 5th. The movements of the stirrup. 6th. The concerted action of the bones of the ear. 7th. Mechanism of the membrana tympani. 8th. Mathematical appendix.

1. Helmholtz first discusses fully the theory first advanced by Ed. Weber, that the ossicles of the ear and petrous bone must be regarded as solid, incompressible bodies, and the labyrinth water as an incompressible fluid in the transmission of sound. For if, in an elastic medium infinitely extended, the dimensions of the vibrating mass are infinitely small compared with the length of the sound wave, the relative displacement of individual molecules of this mass must be infinitely small compared with the vibration of the whole mass, and, consequently, infinitely small compared with the length of the sound wave; they may therefore be disregarded, and the mass considered as vibrating as a whole, and not by its separate molecules. Solid elastic bodies, not infinitely extended, but with limits, against which the waves of sound may strike, are subject to the same law, provided that

no linear dimension of these bodies is very small compared with the other dimensions. But Kirchoff's studies on the equilibrium and vibration of an infinitely thin elastic rod, as applied by Helmholtz, prove that, in immovable elastic bodies with linear dimensions infinitely small compared with the wave-length, vibrations of a simple tone produce, upon two points of the elastic body, relative displacements which are infinitely small compared with the entire amplitude of the vibrations, or in other words, that such masses act exactly like solid bodies. As the wave-length of c_6 is about 1,000 cm. in air, and 4,000 cm. in water, while the dimensions of the ear are each only a small fraction of a centimetre, it follows that the above rules apply to the conducting apparatus of the ear, the separate molecules of which suffer displacements among themselves relatively small, compared with the amplitude of the sound-wave; the separate bodies forming this apparatus act, then, absolutely as solid bodies. Again, if it were possible to set the small bones of the ear into regular vibration, they would produce tones far above the limits of our musical scale, and would be, consequently, imperceptible.

2. The second section is taken up with a minute description of the membrana tympani in the superior part of the tympanic ring, and the position of the membrane itself in its relation to the axis of the meatus. The neck of the hammer fits into a recess between two sharp projections of bone, which Helmholtz calls the Rivinian recess, and this recess is filled by the loose membrane known as the membrana flacida Shrapnelli. From the two projections of bone, quite tense bands of fibres pass to the anterior border of the hammer, thus suspending that bone. The funnel shape of the membrana tympani is given as it has been frequently described, and Helmholtz adopts the explanation of the light reflex, which has already been given by Politzer and others, namely, that it is due to the reflection back of light from that portion of the membrane which is perpendicular to the rays thrown against it. In regard to the membrane itself, the only peculiarities noticed are that the circular fibres are strongly developed into cords on the edges of the Rivinian segment. The fibres of which the membrane is composed are dense and unyielding, thus forming an inelastic and inextensible structure.

3. Gruber's descriptions of the attachment of the hammer to the membrana tympani, are accepted by Helmholtz: "near the lower end of the manubrium, the union between the bone and the thickened tissue of the membrana tympani is close; near the processus brevis, however, a loose layer intervenes between the bone and the membrane, or there may be a kind of incomplete joint-space, which is limited on both sides by the closer union between the periosteum of the hammer and the borders of the cartilaginous layer, together with the fibrous tissue of the membrana tympani."

The second and strongest attachment of the hammer is by a broad tendinous band arising from the hammer just below its head, and reaching as far as the stump of the processus Folianus, and attached to the spina tympanica major; this is called the ligamentum mallei anterius. From the bony ridge which constitutes the lower edge of the hammer, another ligament passes to the wall of the tympanum, called the lig. mallei externum, but, inasmuch as its posterior fibres are very strongly developed and constitute the chief axis of rotation of the hammer, Helmholtz gives this bundle of fibres the special name of lig. mallei posticum. This ligamentum posticum runs in the same direction as the strongest fibres of the ligamentum anterius, and these two constitute the axis on which the hammer moves. The other fibres of these ligaments serve to restrain the rotation of the manubrium outwards.

The tensor tympani muscle, which must be regarded as a powerful muscle on account of its penniform origin, is attached to the manubrium a little below the axis-ligaments, and consequently keep these stretched.

"The hammer, thus fastened, possesses, besides the tendon of the tensor tympani muscle, the following bands capable of retaining any rotation of the hammer outwards:—1. The middle and anterior fibres of the lig. externum. 2. The lig. superius. 3. The upper fibres of the lig. anterius. The membrana tympani itself acts as a band of restraint, against too strong rotation of the handle of the hammer inward."

4. The anvil has been always described as attached to the hammer by a capsular ligament, but the relation and form of the two articulating surfaces has never been accurately studied before. The minute studies of Helmholtz show that the articulating surfaces of the anvil and hammer form a pair of cogs which oppose the rotation of the hammer inwards, but allow it to be driven outwards without carrying the anvil with it. By this arrangement, when the hammer is rotated inwards, the cogs on the articulating surface of this bone, and those on the articulating surface of the anvil, fit firmly into each other, and the rotation is thus communicated to the anvil; if, however, the rotation of the hammer is outwards, the cogs separate, and the hammer alone moves outwards. This beautiful arrangement thus protects the delicate labyrinth of the ear from violent fluctuations of pressure, to which it would otherwise be liable whenever air was forced into the tympanum. Helmholtz estimates that the possible rotation of the two ossicles upon each other will hardly reach 5°.

If the connection between the anvil and stirrup is severed, the attachments of the ligaments of the anvil and the axis of rotation of that bone are such that the rotation of the handle of the hammer inwards must cause the head of the hammer to incline backwards, and must lift the anvil slightly from its position. The consequence of this movement is that the axis of the hammer is drawn away from a straight line, and the ligamentum mallei posticum is more tensely stretched.

The contraction of the tensor tympani muscle must render all the bands of the ossicles tense, with the exception of the ligamentum superius, and bring the anvil into a position where the cogs of its articulating surface fit the tightest into those of the hammer.

5. The capsule of the anvil-stirrup articulation contains more compact fibres on its inferior than on its other sides, and the attachments of the base of the stirrup in the oval window are more tense on the inferior than on the superior surface, and most compact at the posterior end. The result of such attachments is that the motion of the head of the stirrup, instead of being directly inwards and outwards, is somewhat downwards and backwards, and Helmholtz, by experiments, concludes that the highest possible excursions of the stirrup cannot exceed $\frac{1}{18}$—$\frac{1}{14}$ mm. Experiments also demonstrate that, when the

handle of the hammer is driven outwards, no strain is exerted on the stirrup, and consequently there is no risk of that bone being torn out of the oval-window. When the handle of the hammer is forced inwards, the head of the stirrup rises, owing to the unequal attachments of its base.

6. The three points, the end of the short process of the incus, the end of the long process of the incus, and the end of the manubrium, lie so nearly in a straight line, that these two bones constitute a simple lever, the fulcrum of which is the short process of the incus, the point at which force is applied is the end of the manubrium, while the third point of the lever is represented by the end of the long process of the incus and the stapes which is attached to it. Measurements of the different areas of this level show that the excursions of the end of the anvil and, consequently, of the stirrup are only $\frac{2}{3}$ as great as those of the handle of the hammer, but the pressure is $1\frac{1}{2}$ times as great as that exerted against the handle of the hammer.

The remaining portion of this section is taken up with an explanation of the peculiar buzzing or jarring sounds heard in the ear when certain notes are struck, resembling what is heard in musical instruments when something is loose. This phenomenon Helmholtz considers due to a rattling of the cogs of the anvil and hammer against each other; the anvil not being driven outwards during the outward phase of a vibration as far as the hammer, the cogs of the two bones are separated, and as the hammer returns on the inward phase of the vibration, it strikes against the anvil. A description of Helmholtz's model of the tympanic apparatus, now familiar to all physicists, follows.

7. The peculiarity of the membrana tympani lies in the fact that it is a *curved* tense membrane, its tension modified by the handle of the hammer which can draw it inwards. The peculiar curvature is due to the circular fibres, which draw the radial fibres towards one another. A mathematical discussion follows on the relative displacement of the surface of the membrana tympani and the end of the handle of the hammer, from which it follows that a relatively small amount of air-pressure on the membrane, will counterbalance a strong force acting on the handle, and the tension of the radial fibres can increase under slight changes in the air-pressure. In proportion then as the action of the air-pressure increases, the excursions of the handle become smaller, a fact proved by Helmholtz by experiments on preparations, where he found that the free central portions of the membrane were displaced more than three times as far as the tip of the handle.

The acoustic properties of membranes curved like the membrana tympani, have been but little studied, but Helmholtz proves, by experiment, that such a membrane gives a powerful resonance.

The last section of the work is taken up with a mathematical discussion of the mechanism of curved membranes.

The work of the translators is exceedingly well done, especially when we consider the terse, almost defective, style of the author, and they deserve the thanks of the profession for this addition to English scientific works. J. O. G.

Modern Medicine. By William O. Johnson, M. D. Re-printed from the North American Review, July, 1873. Pp. 39.

In this paper, the author discusses the position which medicine now holds in relation to the sciences, and describes some of the most important of the recent discoveries.

Without undervaluing the allied sciences, he insists on the impossibility of applying their laws to the varying condition of the system in disease. "Pure Science," he says, "admits no uncertain elements, but we cannot wait for her elimination of them ; and when a physician, upon a balance of probabilities alone, acts, as he must, with a promptness flush with his decision, he is only like the navigator who trusts to his instincts in the tempest as readily as to his observations in the calm." He maintains that the practice of medicine is essentially an *art*, and quotes the remark of Sir William Gull, that "if it were possible to conjoin in one human intelligence, all that is now known of all other sciences, each knowledge would be compatible with entire ignorance of clinical medicine."

After an interesting discussion of this subject in its various branches, the author gives simple accounts of some of the uses of the sphygmograph, the thermometer, the ophthalmoscope, and of electricity, gives a slight sketch of Dr. George Johnson's contributions to our knowledge of cholera and a brief account of the controversy concerning Lörstofer's corpuscles. The paper is well worth the attention of the profession, though written for the better class of general readers.

BOOKS AND PAMPHLETS RECEIVED.

Handbook of Physiology. By William Senhouse Kirkes, M.D. With two hundred and forty-eight illustrations. Philadelphia: Henry C. Lea. 1873. Pp. 656. A new American from the Eighth enlarged English Edition.

Law and Intelligence in Nature, and the Improvement of the Race in accordance with Law. By A. B. Palmer, A.M., M.D. Lansing: W. S. George & Co. 1873. Pp. 31.

The First Annual Report of the Charlestown Free Dispensary, with the Act of Incorporation and By-Laws. Charlestown: Caleb Rand. 1873. Pp. 20.

Treatment at St. Luke's Hospital, N. Y.—*The Medical Record,* June 16, 1873, states that to reduce the temperature in such diseases as pneumonia, scarlatina, &c., cacoa butter is employed. The body of the patient is to be thoroughly rubbed with it twice a day.

Gunpowder Burns.—An old prescription, supposed to be very serviceable in burns of this nature, is bichloride of mercury one grain to the ounce of water, to which one drachm of tincture of benzoin is added.

Mosquito Netting as a Surgical Dressing.—In those cases where it is desirable to keep up support and pressure, and at the same time permit the free escape of all discharges from the wound, or ulcer, or whatever it may be, the ordinary mosquito netting used for a bandage meets all the indications. If the discharge is considerable, a pad of oakum may be placed beneath the parts to secure the discharge, thus insuring perfect cleanliness.

Boston Medical and Surgical Journal.

Boston: Thursday, September 4, 1873.

Considerable interest has been manifested by the English journals in a trial which took place lately at the Wicklow Assizes, arising from a case of death from chloroform poisoning, occurring at Sir Patrick Dun's Hospital, in the service of Dr. Bennet. The facts of the case are about these. The patient, an unusually stout and powerful man, had sustained an injury to his toe of such severity as to render its removal necessary. He was accordingly placed upon the table the morning after his entrance, and chloroform was administered by Dr. Bennet's first assistant, a young physician, while one student took the pulse and a second kept his finger upon the femoral artery. The patient struggled violently, and the apparatus was removed two or three times from the man's face. It had been on altogether about three minutes, and three drachms of chloroform had been given, when respiration suddenly ceased, and simultaneously the pulsation of the radial and femoral arteries grew weaker and stopped. All efforts at resuscitation were in vain, and the universal testimony was that the man was dead at the moment that the dangerous symptoms were discovered.

The plaintiff endeavored to prove that sufficient precautions in the administration of the anæsthetic had not been taken, and some interesting facts were brought out by the testimony. It was stated that chloroform should not be given to produce the third stage of anæsthesia, as it is called, unless the heart be carefully examined beforehand, and a physician of experience hold the pulse. Moreover, the counsel for the plaintiff brought forward the advantages claimed for ether and the dangers of chloroform, although the discussion of this point was not as complete and satisfactory as one could have supposed or wished. On the other hand, the witnesses for the defence testified that it was not necessary in all cases to examine the heart, that the usual precautions had been taken, and that the man died from "a sudden arresting of the heart's action, the result of his idiosyncrasy."

While we think that the jury would have been guilty of an act of great injustice had they found for the plaintiff, we regret greatly that advantage was not taken of this opportunity to test the question of ether *versus* chloroform, and to determine to what degree men are liable for damages who confess that they use an agent dangerous to life, in spite of every precaution that can be taken, on the ground of its *convenience.* There does not, then, exist the man of whom it can be said that he does not possess an idiosyncrasy as fatal to him if he breathes chloroform as the most deadly poison.

It is not our purpose here to urge again at length the great advantages of ether in anæsthesia; but we cannot refrain from pointing out in this connection the striking difference in the amount of care requisite for the administration of the two agents. Who that has visited the European, and many American hospitals as well, when chloroform is given, has not been struck with the great amount of precaution found absolutely necessary for the safety of patients under its influence, with the anxiety of operating surgeons and the frequent interruptions to operations which the least intimation of danger gives rise to. We heard a distinguished Dublin surgeon once confess that there was not a moment during a surgical operation that one half his attention at least was not given to the patient's pulse and respiration. On the other hand, it is a well-known fact that ether can be given by the most unskilled hands, by the nurse, the ward-tenders, the patient's friends, if circumstances render it necessary, while the surgeon, confident in the safety of his patient, gives to the operation in question his undivided attention. Anxieties and delays are unknown. As a natural consequence of this, it can be pushed to a degree of insensibility, and used for a length of time that would make a chloroformist shudder, and may be given freely in the most trivial operations and examinations. Who can doubt that suffering humanity is not more benefited by such an agent as this, and who, once accustomed to its use, would abandon it for the INCONVENIENCE, to say nothing of the dangers, of chloroform.

WE are in receipt of the first annual report of the Charlestown Free Dispensary, with the Act of Incorporation and By-Laws of the Charlestown Free Dispensary and Hospital. It is but little over a year ago that a dispensary was established in Charlestown, where hitherto there had been no organization, except that of the overseers of the poor, to meet the wants of a city of thirty thousand inhabitants. A few months later, it was thought advisable to add a small free hospital to the dispensary, and the legislature was petitioned for an act of incorporation. The act was approved, and the hospital work will be begun as soon as the necessary funds have been raised. Meanwhile, the success of the dispensary has become an established fact, as will be seen by the report of the Superintendent, Dr. Edward J. Forster. The character of the gentlemen who have this matter in hand, and the excellence of the medical staff will, we have no doubt, ensure the success of this much-needed charity.

THE PROPAGATION OF CHOLERA.—The discussion on cholera, in the section of Public Medicine, at the meeting of the British Medical Association, was well maintained and of considerable interest. The theory advanced by sanitary authorities of the Russian government, headed by Dr. Pelikan, that cholera is endemic in Russia, and that the disease, as seen at the present moment there and elsewhere on the Continent, deserves the name, not of Asiatic or Indian, but of European or Russian cholera, was not sustained. The experience of the English and Indian cholera authorities is directly opposed to this, their view being that the disease was sustained by fresh waves of the epidemic from India and Persia. Dr. Pettenkofer's views, that direct and indirect contagion was not the means of propagation of cholera from man to man, were constantly opposed, it being maintained that cholera is chiefly propagated by drinking water. Many of the speakers expressed strongly their belief in the communicability of cholera by direct contagion especially.

Correspondence.

DOWN EAST, Aug. 10th, 1873.

MESSRS. EDITORS,—Back in these woods, we see strange things. A few days ago, I took out of the Post Office a long letter from New York, beginning "Dear Doctor," and ending "Your Friends Lilly & Phelan Evansville Indiana"—. No unnecessary punctuation, as you will observe. What was my surprise in calling on Dr. B., at Congregation Creek, to find that he had one, just like it, and he tells me that they have been sent widely through the country to all of us country doctors. On further examination, we found it was only a *fac simile* letter. I had thought, before, that these gentlemen were very kind; and had wondered from whom they quoted that first line, which reads—"You ask, 'Is it worth my time to investigate?'"; for I was confident that I never wrote it.

First, let me answer that question. Yes, if you think it worth while.

Secondly. Please say to Messrs. Lilly and Phelan that there's no use in putting the names of regular *recommenders* upon their circulars. We country doctors know how easy it is to get names in Boston and New York and Chicago, to put on circulars for general distribution. We've seen the names before, and don't think that the owners of them ever consider long before writing them down.

Thirdly. Please say to Messrs. Lilly & Phelan that, up in this country, we make cheese. We are in the habit of putting a little piece of one of the stomachs of the calf in milk, to make the cheese separate from the milk. If we leave it too long, and in a warm place, it begins to digest the milk.

"Well, what of that," says Messrs. L. & P. Why—

Fourthly, that we've been using "Nature's Solid Extract of Aromatic Liquid Pepsin," and simply prevented the cheese-press from catching dyspepsia. That's all.

Fifthly. Please say to the other country doctors, who don't know any more than we do, that pepsin can be very easily made an "Aromatic Liquid Pepsin" by cutting up a calf's rennet bag and bottling it up in half a gallon of pale sherry. It won't cost nearly so much, and mother used to feed her thirteen babies on it, at the rate of a teaspoonful to a cup of milk, with a little sugar mixed in, and a scratch of nutmeg on the top.

I am told that you can buy rennet bags cheap in Boston market. They are much better, I believe, after drying for weeks; and I should prefer them to pepsin. They will keep longer and better.

I am very truly yours, RUSTICUS.

Medical Miscellany.

THE death of Dr. W. O. Johnson was sudden and unexpected, and will be received with sincere regret by his many professional friends. His late article in the *North American Review*, a notice of which will be found in another column, has attracted very general attention, and is good evidence of his ability as a writer. The profession has lost in him an able man.

THE report of the Providence (R. I.) City Registrar for the month of July is of interest in connection with the new regulation, in regard to stale fruit or vegetables, adopted by our own City Board of Health. The danger from the use of such articles is greater in the month of August, and we cannot but think that the regulation is a wise one. Mrs. Winslow's soothing syrup tells its own tale. Those only who have charge of the sick poor of our large cities can tell how often "Mrs. Winslow" has soothed the little sufferers to that sleep "that knows no waking." We quote the following extracts:—

"Of the 55 decedents in July from diarrhœal diseases, 22 were American, and 33 of foreign parentage. According to age, there were 41 under 1 year, 10 from 1 to 2 years, and 4 over 40 years, making a total of 55 decedents from diarrhœal diseases. It is certain that these infants under 2 years of age, nearly all of them under 1 year, did not contract their disease from eating fruit and vegetables. We have several times, in past years, analyzed the mortality from diarrhœal diseases with precisely similar results. As we find, therefore, that considerably more than three-fourths of all the mortality from diarrhœal diseases, except Asiatic cholera, in Providence, is found in infants under two years of age, we are compelled to believe that, in this city at least, neither ripe nor unripe fruit and vegetables have any perceptible influence upon the mortality from these diseases. The infantile decedents from diarrhœal diseases are killed by the effects of heat and impure air, especially the latter.

"There were two deaths in July from poisoning. One was from an overdose of morphine; the other from Mrs. Winslow's soothing syrup. There ought to be some power to stop the sale of a rank poison like Mrs. Winslow's soothing syrup, under the false pretence that it is perfectly safe."

HOW TO CURE A COLD.—The whole fraternity of editors, and all their readers, owe a debt of gratitude to one of their members, the editor of the *Danbury News*, for a report of the following case, instituted by, though not practised on himself, but by one of his editorial corps. "He boiled a little boneset and horehound together, and drank freely of the tea before going to bed. The next day he took five pills, put one kind of plaster on his breast, another under his arms, and still another on his back. Under advice from an experienced old lady, he took all these off with an oyster-knife in the afternoon, and slapped on a mustard paste instead. His mother put some onion drafts on his feet, and gave him a lump of tar to swallow. Then he put some hot bricks to his feet and went to bed. Next morning, another old lady came in with a bottle of goose oil, and gave him a dose of it on a quill, and an aunt arrived about the same time from Bethel, with a bundle of sweet fern, which she made into a tea and gave him every half hour until noon, when he took a big dose of salts. After dinner, his wife, who had seen a fine old lady of great experience in doctoring, on Franklin Street, gave him two pills of her make, about the size of an English walnut and of similar shape, and two tablespoonfuls of home-made balsam to keep them down. Then he took a half-pint of hot rum, at the suggestion of an old sea-captain in the next house, and steamed his legs with an alcohol bath. At this crisis two of the neighbors arrived, who at once saw that his blood was out of order, and gave him half a gallon of spearmint tea and a big dose of castor oil. Before going bed he took eight of a new kind of pill, wrapped about his neck a flannel soaked in hot vinegar and salt, and had feathers burnt on a shovel in his room. He is now thoroughly cured, and full of gratitude."—*The Sanitarian.*

AN interesting case is reported by M. Dieulafoy in which an infant, six hours old, was poisoned by a dessert spoonful of laudanum, and from whose stomach the poison was extracted, before it had taken fatal effect, by means of the pneumatic aspirator.

THE members of the New Hampshire Medical Society, accompanied by their wives, will visit Centre Harbor on Tuesday, September 16, and hold the second Semi-annual Meeting of the Association.

The North Essex Medical Society of Mass. have accepted their invitation to be present.

MR. JOHN WOOD, in his address on Surgery, in speaking of anæsthetics, remarks:—"We follow but tardily, in this old country, in that combination of pleasure with utility which has led lately the inventive genius of our transatlantic brethren to the association of æsthetics with anæsthetics, in the performance of operations under these agents to an obligato accompaniment upon the organ, and an appropriate address by a popular preacher improving the occasion on behalf of morals."

A DILEMMA FOR TEETOTALLERS.—We should like to ask the members of the legislature if they are prepared to continue the use of bread as an article of diet, in the face of the following fact, given in the *Medical Press and Circular*:—

In the *Chemical News* for May 30th, Mr. Bolus says that he has detected a small percentage of alcohol in six samples of new bread purchased at different shops in London. He says, "It is probable that the amount of alcohol contained in bread is too small to be of any dietetic importance, but it may perhaps be worth while to notice that forty 2-lb. loaves are about equal in alcoholic strength to an ordinary bottle of port."

FOREIGN BODIES IN THE STOMACH.—A case is recorded in *Il Raccoglitore Medico* (no. xvi. 1873), by Dr. Benedetti, in which a nun, aged twenty-two, after suffering for some days from symptoms of gastric fever, with obstinate vomiting, ejected from her stomach a brass cross, 1·3 inches long, the cross piece being 1·4 inches long. She remembered having swallowed it when she was nine years old. In the interval it had not produced any inconvenience. A case is also related in the *Imparziala* for June, in which a soldier swallowed a table-spoon. Severe dyspnœa followed; and in about three quarters of an hour the spoon was ejected by vomiting.—*London Medical Record.*

MORTALITY IN MASSACHUSETTS.—*Deaths in seventeen Cities and Towns for the week ending August* 23, 1873.

Boston, 153—Charlestown, 10—Worcester, 29—Lowell, 24—Milford, 1—Chelsea, 13—Cambridge, 19—Salem, 13—Lawrence, 18—Springfield, 9—Lynn, 27—Fitchburg, 12—Newburyport, 4—Somerville, 10—Fall River, 38—Haverhill, 7—Holyoke, 9. Total, 396.

Prevalent Diseases.—Cholera infantum, 103—consumption, 45—dysentery and diarrhœa, 20—typhoid fever, 19—scarlet fever, 13—cholera morbus, 8.

One death from smallpox occurred in Holyoke.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, August 30th, 170. Males, 92; females, 78. Accident, 3—abscess, 1—apoplexy, 1—inflammation of the bowels, 3—disease of the bladder, 1—disease of the brain, 6—calculus, 1—cancer, 2—cerebro-spinal meningitis, 1—cholera infantum, 47—cholera morbus, 1—consumption, 17—convulsions, 2—debility, 2—diarrhœa, 6—dropsy, 3—dropsy of the brain, 3—drowned, 1—diphtheria, 2—dysentery, 5—erysipelas, 1—scarlet fever, 7—typhoid fever, 5—disease of heart, 4—intemperance, 2—disease of kidneys, 4—disease of the liver, 2—congestion of lungs, 1—inflammation of the lungs, 6—marasmus, 8—pyæmia, 1—old age, 5—paralysis, 1—pleurisy, 1—premature birth, 1—peritonitis, 2—puerperal disease, 1—rheumatism, 1—scalded, 1—suicide, 1—disease of the spine, 1—tabes mesenterica, 1—teething, 1—unknown, 3—whooping cough, 1.

Under 5 years of age, 94—between 5 and 20 years, 17—between 20 and 40 years, 16—between 40 and 60 years, 27—over 60 years, 16. Born in the United States, 133—Ireland, 26—other places, 11.

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Original Communications.

PROF. MEYNERT'S METHOD OF EXAMINING THE BRAIN, &c.

By James J. Putnam, M.D.

In an interesting paper by Dr. Burt G. Wilder, entitled Cynophrenology, which appeared in the Journal of Jan. 23, ult., allusion is made to the insufficiency of our present methods of gauging the relative excellence of the different mammal brains.

It is remarked with truth that neither the absolute size of the brain, nor its relative size as compared with the whole animal, nor the number or complexity of its fissures satisfactorily indicates its quality. The first test would place the brain of the elephant and the whale too high in the scale, the second, too low.

There is, however, one test, first suggested, as I believe, by Prof. Meynert of Vienna, which seems to be a satisfactory and practical one. That is, stated briefly, the relation in point of size or weight between the corp. quadrigem. and the cerebral lobes; or, in other words, the relation in point of development between the so-called "posterior division"[*] of the caudex cerebri (Hirnstamm) with its ganglia of origin, and the "anterior division" with its ganglia, i. e. between the tegmentum cruris cerebri with the thalamus opticus and the corp. quadrigem., and the pes (or basis) cruris cerebri with the corpus striatum and nucleus lenticularis.

This latter tract (the pes cruris) is concerned, according to Prof. Meynert, almost exclusively in the transmission of voluntary impulses to the muscles, and stands, therefore, in a fixed relation to the cerebral lobes, in which the voluntary impulses are originated, throughout the entire mammal series. The development of these two structures, viz., pes cruris and cerebral lobes, culminates in the brain of the adult man, whereas the tegmentum cruris with the corp. quad. &c. find their greatest devolopment in the brains of the lower mammals, as the following table will indicate:—

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[*] Compare: The Anatomy of the Mammal Brain, by Theodor Meynert, Stricker's Manual of Hictology, American Edition; also, an analysis of the same in Brown-Sequard's Archives of Scientific and Practical Medicine for February, 1873; also, Ueber die Bedeutung der Zweifachen Rückenmarksursprunges vom Grosshirn. Sitzungsberichte der Königlichen Academie der Wissenschaften. Bd. lxi., H. iii.

	Man. Per cent.	Ape. Per cent.	Deer. Per cent.
Height of basis cruris cer. compared with that of tegmentum	1·1	1·3	1·5
Weight of cerebral lobes compared with that of of entire brain	78	70·8	62
Weight of corpus striatum, with the nucleus lenticularis, compared with that of the entire caudex cerebri	50	40	33·3
Weight of thalamus opticus compared with that of the entire caudex cerebri	19	22·9	30

A table is annexed to the paper "Ueber die Bedeutung des Zweifachen Ursprunges des Rückenmarkes, &c.," showing that, among the large number of mammals examined with reference to that point, in none did the development of the pes cruris equal that to which the corresponding part of the human brain attains.

This seems a not unsuitable place for recording Prof. Meynert's manner of examining the brain in the autopsy room, which is of value because it permits, more than any other, of the exact localization of defined lesions, without at the same time so mutilating the parts as to make them unfit for subsequent microscopic or other examination. The method aims, in the first instance, at the enucleation of the cerebral ganglia from their bed in the white substance of the lobes, so that all the surfaces of these parts may be freely examined.

Each cerebral hemisphere, according to Prof. Meynert, presents at both surfaces the form of an arch, of which one branch is represented by the frontal extremity, the other by the temporal extremity of the hemisphere.

The lumen of the arch of the inner surface is the lateral ventricle, of that of the outer surface the fissure of Sylvius. At the bottom of the fissure of Sylvius lies the island of Reil; directly beneath, and scarcely separated from this, is the surface of the nucleus lenticularis,* a cone-shaped ganglion which lies crosswise in the axis of the arch. Surrounding this, in a curve concentric with that of the main arch, is the corpus striatum (nucleus caudatus), whose large anterior extremity (caput) reaches forward and downward, buried in the frontal lobe, to the anterior perforated space, where it is nearly met by the dwindling posterior extremity (cauda) which curves backward and downward along the lateral ventricle, in which it is everywhere visible, nearly to the extremity of the temporal lobe.

The proposed dissection throws these two false arches into one true arch by cutting out this ganglionic mass which fills its lumen.

The knife has for its guide, in the fissure of Sylvius, the limits of the island of Reil; in the lateral ventricle, the border of the gray surface of the corpus striatum which runs along its inner angle. The principal details of the operation are as follows.†

The brain, removed in the usual way, is laid down upon its convexity, and, the membranes having been torn away as far as is requisite, the temporal lobe on both sides is dissected upwards by a series of cuts opening into the lateral ventricle on one hand, and the fissure of Sylvius on the other, and made in accordance with the rule given above.

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* Nucleus extraventricularis corp. striat.

† Given from memory; I do not know that they are to be found in print.

The next step is to raise the medulla oblongata and cerebellum, and tear away the membranes beneath them which cover the great transverse fissure of the brain. Then, by a second series of cuts made from behind forwards, the mass of ganglia, principally at that part the thalamus opticus, is separated from its connections with the occipital and parietal, and the posterior half of the frontal lobes.

It only remains to enucleate the caput corporis striati from its bed in the white substance of the frontal lobe. This is done by laying the knife transversely on its flat with its edge just in front of the anterior perforated space, and cutting forwards and downwards. If the cut has not been carried forward far enough to surround the bulging head of the ganglion completely, the gray color of its cut surface will reveal the fact. The entire operation, apparently so complicated, is after some practice performed in a very few moments and with great precision. If it be desirable to weigh the different lobes and ganglia separately, as Prof. Meynert is in the habit of doing, the dissection may be continued as follows; otherwise the examination may be completed by making a number of cuts into the various parts perpendicularly to their surface.

A longitudinal cut through the corpus callosum separates the hemispheres from one another.

To separate the frontal lobe from the parietal, the fissure of Rolando, inasmuch as it is a constant fissure common also to most of the apes, is chosen as a guide. The operation is best performed with a single cut of a large pair of scissors.

The parietal lobe is separated from the occipital by cutting through with the scissors from the occipito-parietal fissure into the posterior branch of the fissure of Sylvius.

In separating the thalamus opticus from the corpus striatum, one blade of the scissors is placed to the inner side of the stria cornea, the other to the outer side of the tractus opticus. The cut passes through the capsula interna with little or no injury to either ganglion. The limits of the corp. quadrigem., cerebellum and pons Varolii are sufficiently evident. The medulla oblongata ends with the completion of the decussation of the pyramids.

Prof. Meynert has divided in this way, and weighed in parts, upwards of 1000 brains, with interesting results, not yet fully made public. Among them, the disproportionate atrophy of the frontal lobes in cases of progressive paralysis of the insane, may be mentioned as having been constantly found. In one or more cases of unilateral chorea, the corpus striatum of the opposite side was found to have lost weight distinctly.

The accuracy of the results obtained in this manner is the more to be relied on, in consideration of the fact that if a loss or gain in weight affecting any given part is only apparent, it will be found compensated for by a corresponding gain or loss in the complementary part, and the observation thereby controlled. The membranes are left adherent to the lobes to which they belong.

The thickness of the cortex cerebri may be estimated by a cut, made always at the same point, and in the same direction.*

Clinical Lecture.

DISEASES OF THE EAR.

By Clarence J. Blake, M.D.

Gentlemen,—It will be a great advantage to you, as general practitioners, to be able to make a proper examination of the ear. By this is not meant, simply, that you should be able to use the instruments employed for that purpose, but that you should also have a sufficient knowledge of the appearances presented by the meatus and membrana tympani in health and be able to recognize the changes which accompany disease. In the majority of diseases of the ear, it is not possible to form a positive diagnosis without such an examination; symptoms of an alarming character may result from a simple and easily remediable cause, as in the severe tinnitus aurium, vertigo and nausea, which may result from the pressure of a plug of cerumen upon the membrana tympani or the excessive pain and deafness caused by a boil in the meatus, while, on the other hand, very serious changes may occur in the structures of the middle ear, unaccompanied by any subjective symptom. The frequency with which diseases of the organ of hearing accompany other affections, makes it especially advisable for you to have some knowledge of their diagnosis; the more so, that the ability to make a careful examination will not infrequently give you the clew to the explanation of what otherwise might seem obscure symptoms.

In the subjective symptoms accompanying pregnancy and following childbed, in the affections of the middle ear accompanying the exanthematous diseases of children, in the long train of aural diseases following the catarrhal troubles so frequent in this climate, and in many other diseases all of which are liable to come under your care as general practitioners, you will find this little instrument, the aural speculum, backed by a proper understanding of its use, a most valuable addition to the armor with which you equip yourselves on entering the field of medical practice. With it you will at least be able to determine what cases are amenable to treatment, what cases require immediate treatment, and, something which is of almost equal importance, what cases judiciously to leave alone. I should hesitate in urging you to devote any special degree of study to this branch of surgery, since it has been so far elaborated as fairly to entitle it to rank as a specialty and because your general studies cover so extensive a field, but it would be impossible to present to you too strongly the advantage which you will gain by some knowledge of aural surgery, provided that knowledge so far as it goes be thorough, and of this you will be able to convince yourselves in attending any aural clinic. So far as the use of the instruments is concerned, the examination of the ear is a very simple matter; to understand what is seen is much more difficult and can only be attained by repeated practice.

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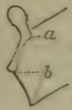
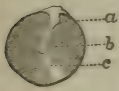
* For this purpose a small, graduated glass tube, with sharpened edges, which has recently been described, would be of service. A piece of the cortex is simply punched out, and examined through the glass. (v. West-Riding Hospital Reports for 1873.)

The parts presented to us for examination are the external auditory canal and the membrana tympani, and, in case of perforation or destruction of the latter, the inner wall of the tympanic cavity.

By turning the ear toward the light, drawing the auricle upward and backward and pressing the tragus forward, we can at most see but a short distance inward, except occasionally where the canal is unusually large and straight, when it is possible to see a portion of the membrana tympani, and that not distinctly; the view of the inner end of the canal is prevented by the double curvature of the passage and by the presence of hairs growing about the meatus. To obtain a satisfactory view, it is necessary to straighten the canal as much as possible and to push the hairs aside; the former may be accomplished by pulling the auricle upward and backward, thus bringing the long axis of the outer portion (the cartilaginous portion) of the canal in a line with the inner (osseous) portion of the canal. For the accomplishment of the latter object, various instruments have been invented. First among these, Kramer's bivalve speculum long has been and still is extensively in use. With several advantages over the simpler method of examination, this instrument possesses two very decided objections; through the openings between the valves, the hairs thrust themselves into the field obstructing the view, and the pressure upon the delicate integument lining the auditory canal, when the speculum is unduly extended as may easily be the case, is apt to cause pain and sometimes more serious results. The simple tubular speculum of von Tröltsch and other aurists accomplishes its object much more satisfactorily, and is, moreover, more readily handled. Before introducing the speculum, however, it is necessary to choose the method of illumination; for this purpose we may employ direct sunlight or direct artificial light, or, better still, diffused light (by day) thrown upon the ear from a concave mirror. Direct sunlight, as a rule, is too dazzling, the eye becomes fatigued, and we are soon incapable of distinguishing those fine points of variation in form of the membrana tympani which play so important a part in the diagnosis of aural diseases. Artificial light presents a disturbing element in the prevailing yellow color which changes the delicate shades in the coloring of the membrana tympani. Diffused light has none of these objections, and, when concentrated by the concave reflector introduced by von Tröltsch, is of sufficient illuminating power and readily under control.

The ear to be examined being turned from the light source, the light is to be reflected upon the ear from the mirror held in the hand, or fastened upon the head; the entrance to the auditory canal should first be carefully examined to detect any malformation, the presence of a foreign body, or evidence of any change, the result of disease; the auricle should then be seized between the ring and middle fingers of the left hand and drawn upward and backward, and the speculum held in the right hand, gently introduced ; when fairly in place, it may be held by the rim with the fore finger and thumb of the left hand ; in this manner both auricle and speculum are completely under control, the right hand being at liberty to use the mirror. Two words of caution are necessary in using the speculum : firstly, do not endeavor to elevate the outer portion of the auditory canal by means of the speculum alone, move the auricle, also, in the desired direction ; unpleasant consequences might ensue from undue pressure, as in the use of the bivalve speculum ; secondly, little or nothing is to be gained by thrusting the speculum into the passage—passing the instrument beyond the line of the growth of large hairs in the meatus and proper manipulation of the auricle are sufficient to ensure a clear view. The speculum having been placed in position, the light should be thrown upon it from the reflector, care being taken to have the opening in the centre of the mirror on a line with the long axis of the speculum ; through this opening, which brings the eye of the surgeon on a line with the point of greatest illumination, the examination may be made. We look down a narrow passage, somewhat flattened laterally, about an inch and a quarter in length and lined with integument continuous with that of the auricle. This lining becomes thinner and more delicate as it passes inward, until it is finally reflected upon the membrane which terminates the external auditory canal and separates it from the cavity of the middle ear. This membrane is not a simple, but, as you know, a very complex structure, the basis of which consists of fibrous tissue arranged in two layers, the fibres of the outer layer radiating from the centre, while those of the inner layer follow the outline of the periphery of the membrane running nearly at right angles to the former. The fibres of the outer layer are continuous in a nearly equal degree throughout the expanse of the membrane, those of the inner layer, however, being massed together at the periphery and diminished in number near the centre. In addition, there is an outer or dermoid coat continuous with the integument of the meatus, and an inner or mucous coat continuous with the mucous membrane of the middle ear. Recalling the more minute description given in the lecture on the anatomy of the membrana tympani, you will perceive how admirably this arrangement of the fibres of the membrana propria and of the delicate outer and inner coats is adapted to the performance of the functions demanded of the membrana tympani, in protecting the middle ear and vibrating at the touch of the sound waves conveyed to it through the air in the external auditory canal. You will readily see, moreover, that, in consequence of disease of the middle or outer ears, this structure will be subject to variations from the normal standard in two ways principally, variations in position and variations in color ; both of these may occur intrinsically from pathological changes in the membrana tympani itself, or extrinsically as the result of pathological changes in the two divisions of the ear, between which it forms the dividing line. Removing a normal membrana tympani, which may be done by carefully dividing the incus-stapes articulation, cutting away the bone with exception of that portion in which the membrane is inserted, and examining it with regard to position, we find, firstly, that it is at an angle of about 45° to the long axis of the meatus, the lower portion being furthest inwards, and secondly, is not a plane surface like the head of a drum, but that the centre is depressed, the result being that, while the general form is that of a shallow funnel, its concave surface directed outward, the sides of the funnel from the centre toward the periphery are convex outward; this may be easily illustrated by placing a weight on the centre of a drum-head, and is shown in the accompanying drawing of a section of the membrana tympani. Holding it toward the light, we find the general color to be a yellowish gray, which forms the ground tone of the color of the membrana tympani *in situ*. This ground tone is varied in the normal ear by the reflection of the coloring of the integument lining the external auditory canal; and, the membrana tympani being semi-transparent by the reflection of light from the middle ear, the coloring of the membrana tympani, therefore, is made up from the reflection of light from the walls of the external auditory canal, from the surface of the membrane itself, from the light passing through it into the middle ear and reflected through it again from the walls of that cavity. Looking through the speculum, we find that only a portion of the membrana tympani, about four fifths of its whole surface, is visible, the contour of the floor of the auditory canal hiding the anterior inferior portion from view. In the anterior superior portion of the membrane, close to the periphery, is a projection of a yellowish white color, the short process of the malleus *(a)*, and extending downward from this point nearly to the centre of the membrane a yellowish-white line, the long process of the malleus *(b)* (manubrium mallei); at the end of the long process, and extending anteriorly toward the periphery of the membrane, we see a particularly bright spot in the form of an isosceles triangle, its apex at the end of the long process, its base extending nearly to the limit of the membrane *(c)*, the light thrown in at the meatus being reflected from this portion of the membrana tympani, and the contour of the surface giving it this peculiar form.* These three points, the short and long processes of the malleus and the light reflex, are the landmanks to be sought for in exploring the membrana tympani; in addition, are to be noted the elevations of its surface, extending in front of and behind the short process, the anterior and posterior folds and the dim line of light in the posterior superior portion indicating the position of the descending process of the incus, and caused by the light which is reflected from it through the membrane.





Having once determined the relative position and appearance of these portions of the membrana tympani in its normal condition, a standard has been acquired by which to measure the importance of any variations and the inference which may be drawn from them as to their possible cause; as, for instance, an undue prominence of the short process, fore-shortening of the long process, and prominence of the posterior fold would indicate that an excess of pressure from without had forced the more mobile portion of the membrana tympani inward. Should there be no evidence of change liable to produce this effect in the outer ear, the cause must be sought for deeper in. In the normal ear there is a nearly equal degree of atmospheric pressure on both sides of the membrana tympani; should the communication of the middle ear with the pharynx be cut off from whatever cause, a portion of the air in the former cavity would in time be absorbed, the result being a partial vacuum and diminution of the atmospheric pressure from within; the preponderance of pressure from without would, therefore, drive the membrana tympani inward, with exception of certain immobile portions. We may go still further and determine, in a measure, the duration of this pressure. It would naturally be expected that, when a certain force is expended upon the whole surface of the membrane, the weaker portion would give way first, from lack of circular fibres; this vulnerable point is about the centre, directly in the track of the triangular light spot. A depression of the membrane would prevent the reflection of the light and the continuity of the reflex would be broken; this would be the first evidence of change in the contour of the membrana tympani; later on, the whole of the surface becomes depressed and the reflex is lost altogether, or represented only by two small spots, one at the end of the manubrium, and the other at the periphery- The variations in form which this light reflex may present are like the changes of the amœbæ, "perplexingly wonderful, and wonderfully perplexing," unless we keep in mind that it is the convexity of the surface and the angle of inclination which it bears to the axis of vision which gives its peculiar triangular shape to the light reflex, and that a break in the triangle implies a variation from the normal position of the membrane corresponding to the hiatus. Aside from indicating changes in the contour of the membrana tympani, the light reflex serves another diagnostic purpose; since it is a reflection from the outer surface of the membrane, its presence implies the regularity and smoothness of the outer coat; should this latter become thickened by disease, the reflex will disappear, or may be presented only by the glimmering phantom of its former self, its outlines preserved but merely indicated, not strongly marked. The two processes of the malleus and the light reflex, therefore, indicate changes in contour, due to extrinsic causes.

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* Lucæ has shown this effect is produced by throwing light on the inner surface of a metal tunnel.

We have now to consider the changes in color due to extrinsic causes. The general color of the membrana tympani is, as we have seen, of a yellowish gray; this has warmth imparted to it by the reflection of the flesh tints from the auditory canal, lightness by the reflection of light from the walls of the tympanum, this being especially the case in the posterior portion opposite the promontorium, and depth by the bluish tinge of the shadows where the yellow light, passing through the membrane, is lost in the deeper portions of the tympanic cavity. As instances of changes in color due to pathological processes in the middle ear, congestion of the mûcous membrane of the middle ear, as it occurs in the first stage of otitis media, gives a reddish tinge; serous and purulent accumulations in the tympanum, a transparent and an opaque yellow tinge; mucus, a grayish tone; and blood, a deep red color to the membrana tympani. Unless the contour of the membrane is very seriously changed, the presence of the light spot, however, shows that the membrana tympani is itself intact, and that these changes in coloring are due to extrinsic causes alone. Pathological processes in the membrana tympani which may effect any one or all of its layers result, as would be expected, in changes both of form and color. These may be confined to a small portion of the surface, as for instance in calcareous deposits, or may include the whole membrane, as is the case in myringitis; in the former case, the change is principally one of color, in the latter, of both color and form. Where the changes are very great, as may be seen in an inflammation which affects, more or less, all the layers of the membrana tympani, the landmarks may become entirely obliterated, the light reflex disappears, the malleus is no longer visible, and what we suppose to be the membrana tympani is an irregular plane or convex surface of any shade of color between a vivid red and a dirty yellow. In this, as in many other cases where ocular examination alone is not sufficient to determine the exact condition, use may be made of the probe to bring the sense of touch to the assistance of the surgeon. This tactile examination has been elaborated by Prof Miot, of Paris, who uses probes of various forms. A fine silver probe, tipped with cotton, is sufficient for the purpose; it should be introduced carefully, under good illumination, and properly employed does no harm, and is a valuable aid in diagnosis.

MEDICAL EXPERTS.—With certain medical gentlemen there seems to be a strong desire to be considered medical experts. Especially is this disposition shown in cases of questionable insanity before our courts. We have always considered that to be an expert required a thorough and practical acquaintance with the subject, but the apparent necessity of the times seems to have rendered this unnecessary. The pleas of moral insanity, emotional insanity, and the like, are now considered to be such forlorn hopes that the lawyers seem to be willing to take the opinion of any one who may volunteer it. The consequence is, we are getting a new instalment of experts not known or recognized by the profession, but nevertheless of value as figure-heads. At a recent trial in New York, we saw a number of respectable medical practitioners lending their names to the court and stultifying themselves by the expression of opinions for which they had no possible foundation. The study of insanity has been recognized as a specialty for the last quarter of a century; and it is fair to suppose that there are thousands of questions that can be put by an attorney which are unanswerable, save on the basis of a very extensive practical experience in the treatment of the disease. A physician who has not such an experience, places himself in a false position by claiming to be qualified to give an opinion. There would be no disgrace for any practitioner to acknowledge incompetency in this respect, if called upon. We hope that, in future, any such who may be urged for an opinion may have the moral courage to acknowledge ignorance before it is made so evident in a crowded court-room, and through the columns of the daily papers. It is also obviously unfair to the real experts on insanity—the gentlemen who have the best opportunities for studying the disease—to have the crude opinions, formed by a hasty glance at some authority, foisted upon the public as representing the advanced views of the present day. It is just such cases as these that give the legal profession the whip-hand of the medical profession, and give rise to the complaint, on our part, that the former never lose an opportunity to make fools of us. We believe that every one has his place; and if some of the medical tortoises trust to the legal eagles to teach them to fly, they must learn, sooner or later, that the higher they are taken into the air the more dangerous will be their fall when left to their own resources.—*New York Medical Record.*

Progress in Medicine.

REPORT ON ANATOMY.

By Thomas Dwight, Jr., M.D.

[Concluded from p. 239.]

Vascular System.

The distribution of the finer arteries to the brain is discussed by Heubner, in the *Allgemeine Med. Central Zeitung*, Dec. 21, 1872, and by Duret, in the *Archives de Physiologie*, March, 1873; the latter, however, considering at present only those of the medulla and pons. He finds that the very small arteries may be divided into three classes. Those of the first class are lateral, and supply the roots of the cranial nerves; those of the second are median in origin, and run to the ganglionic masses near the floor of the fourth ventricle; and the third class, coming from various sources, supply the medulla itself. Heubner studied the manner in which the smaller arteries divided, and found that those supplying the ganglia of the base of the brain did not ramify in the same way as those supplying the convolutions and the subjacent white matter. At the base, according to him, each small artery has a definite region to nourish, and does so independently of its neighbors; but, on the convexity of the brain, the arteries anastomose so as to form a rich net-work before sending the terminal branches to the interior.

The Circulation in the Small Intestine.—Dr. Arnold Heller *(Proceedings of the Royal Society of Leipzig*, 1872, Heft 1 and 2) has given his attention incidentally to this subject. He has examined the intestine of dogs, cats, pigs, hedgehogs, rabbits and men, and finds that while the plan is not quite the same in these animals, it, in one point, agrees in none of them with received views. The point in question is the circulation in the villi. In almost all anatomies and physiologies, there is a more or less diagrammatic figure of a villus, with an artery and vein running to the point, with anastomosing branches covering the surface. This, our author says, he has never seen. According to him, the artery runs to the end of the villus before giving off branches, except in man, in whom they begin about the middle of the villus. In man and the rabbit, the vein begins at the apex and runs into the network in the submucous tissue without receiving any tributaries in its course. In most of the others it begins near the base, taking the blood from the capillary net covering the villus.

Nervous System.

The Distribution of the Glosso-pharyngeal Nerve in the Pharynx and Tongue. By Jacob, of Munich.—Not having seen this text book, we give the most important conclusions from *Virchow and Hirsch's Jahrbericht* for 1873. Just as in the intestines there are two plexuses of nerves (Auerbach's and Meissner's), situated between the two layers of muscular fibres and beneath the mucous membrane respectively, so there are two similarly situated networks in the pharynx, formed by anastomosing branches of the glosso-pharyngeus, the vagus and the sympathetic. The stylo-pharyngeal branch of the facial frequently joins the glosso-pharyngeus on its way to the tongue. The distribution of the glosso-pharyngeus in the tongue is regulated by the papillæ circumvallatæ, which it supplies with one set of branches, another going to the organs of taste. The nerves of the two sides usually unite near the foramen cœcum. Ganglia are always found in connection with this nerve, both in man and animals, but their number varies considerably in different individuals.

Prof. Axel Key and Dr. Gustav Retzius, of Stockholm, who are preparing an elaborate work on the anatomy of the nervous system, give a preliminary account of their views on the membranes of the cord, the lymph spaces and some points of structure, in *Schultze's Archiv*, vol. 9, heft 2. The most interesting part is that which treats of the lymph spaces, showing their relations to the membranes and to the cavities formed by the latter, and the way in which they pervade the entire nervous system. The vexed question, whether the arachnoid is to be considered a closed sac, analogous to the pleura, with a parietal layer adherent to the dura mater, is dismissed as of little importance; for but one layer has any significance, namely, that one which, being free between the dura and pia mater, divides the cavity into a subdural and a subarachnoid space. In the neck, the arachnoid is very close to the dura, being joined to it by many bands of connective tissue, which are less frequent lower down. The subdural space is larger below than above, and the reverse is true of the subarachnoid. The ligamentum denticulatum divides the latter into two portions, which, however, are in pretty free communication. The anterior space has bands similar to those of the subdural space, running from the arachnoid to the pia, but in the posterior space they are far more numerous and more membranous, forming a great many partial subdivisions of the space. In the median line, these bands are so marked that they are called the septum posticum. The pia mater consists of two layers; the superficial is a loose tissue, forming a number of chambers, more or less perfect, opening into the subarachnoid space. The deep layer, pia intima, adheres very closely to the cord; so much so as to follow every vessel into the interior, forming a canal around it. These canals are the so-called peri-vascular spaces, and, of course, are continuous with the subarachnoid space, from which they can be injected far into the cord. The spinal nerves are at first surrounded by two canals, the inner, from the subarachnoid space, being separated, by a prolongation of the arachnoid from the outer, which comes from the subdural space. The two spaces unite in or about the ganglion of the posterior root, and extend throughout the nerves, existing even around the sheaths of the primitive nerve fibres. The authors have frequently seen, in medullated nerve fibres, the constrictions described by Ranvier (vide first Report), which are caused by the sheath bending in so as to touch the axis-cylinder. They also confirm his views as to the regular appearance of the nuclei of the sheath, one between every two constrictions, which are nearer together in small than in large nerves.

The Termination of Nerves in Glands and in Striated Muscular Fibre is discussed, in the same journal, by Kupffer (vol. 9, heft 2) and by Arndt (vol. 9, heft 3) respectively. The former studied the salivary glands of the cockroach. As a nerve comes to an acinus, its structureless sheath becomes continuous with the structureless membrana propria, and the nerve runs into the substance of the cell. It does not go to the nucleus, as some observers maintain, but *toward* a kind of capsule, which really is the blind end, or rather begnning, of an ultimate duct. The author has never seen a nerve reach this capsule, and is the more inclined to doubt that it does so from having seen it divide after entering the cell.

Till the structure of a striped muscular fibre is more thoroughly understood, it is vain to expect to settle the manner in which nerves end in it. Arndt gives a good review of the various opinions, and a valuable contribution to our knowledge of certain points. He holds that the elevation, marking the point of junction of a muscular and a nervous fibre, is of the same character in the higher animals and the invertebrates. He finds that the neurilemma of the nerve is continuous with the sarcolemma, so that the elevation is situated under the latter, as is maintained by Kühne. After the nerve is inside of the sheath, no very definite or reliable data as to its termination are as yet to be expected. Arndt finds, also, a network of nerves between the fibres, which he thinks is formed by sensory nerves, the motor ones going into the fibres.

UTERUS.

The shape of the uterus has been studied by Hagemann, by means of injections from the vagina. (*Archiv für Gynækologie*, vol. 5, heft 2.) His specimens include casts of the uterus of the infant, and of women of various ages who have and who have not had children. The cast of the uterus of the infant shows evidence of a posterior median depression in the uterus, and also of ridges on both the anterior and posterior walls, but particularly the former, running toward the orifices of the tubes. The antero-posterior diameter of the cavity is even smaller in the young virgin than in the infant; it is increased after childbearing, and, independently of this, by advancing years. The cavity enlarges gradually from the os internum with straight sides, except in the case of those who have been mothers, with whom it enlarges suddenly, the sides being convex outward. After pregnancy, the cervix is shorter, and the orifices, particularly the external one, are larger. Hagemann's method is good, but his paper leaves the impression that the number of experiments is too limited to justify much generalization.

PLACENTA.

The authors quoted in this connection in the second report, are all believers in Hunter's sinus system, of which Mr. Braxton Hicks is the most active opponent. The Hunterian theory is clearly defined by Dr. J. Matthews Duncan, in the *Edinburgh Medical Journal* for January. "It is that the mother's blood passes, in the curling arteries, through the decidua serotina, to be diffused through the substance of the placenta, and then returns to the uterine sinuses of the mother through utero-placental sinuses; that, as it is diffused through the substance of the placenta, it flows in cells, spaces or caverns, which extend from the caducous portion of the decidua serotina to the placental chorion over the whole extent of the organ; that these cells, spaces or caverns are partially filled or nearly choked up with tufts of fœtal villi." Dr. Duncan then goes on to show that, in spite of partial separations, this cavernous space is one and continuous throughout by gently pushing a small air-bubble through it. Mr. Hicks denies this theory entirely, in a paper published in *Obstetrical Transactions*, vol. 14. He considers the results obtained by injections to be quite untrustworthy, and due to rupture of the delicate walls of the vessels or to more extended laceration. He denies that colored water injected into the placenta will return by the vessels on its uterine surface, as a wax injection does, according to Hunter. He ignores Dalton's experiments with air, which, indeed, are very damaging to his theory. He argues that there is no evidence of any transition stage between the sinus system and a preceding arrangement, so that the former either existed from the beginning or does not exist at all, and maintains, from dissections made at various stages of pregnancy, that the latter is the case. Perhaps the strongest point made by Mr. Hicks is the occasional absence of blood in the intervillar spaces. As he observes, it is far more difficult to account for its absence if it be normally there than for its presence if it be not, for, in the latter case, a small laceration of a vessel is all that is necessary. He has four times examined the placenta *in situ*, from the fourth to the sixth month of pregnancy, and twice found no blood between the villi. The following is a short sketch of the most important of his views of the structure of the organ. There is a membrane, the chorion, on the inner side, and the mucous membrane of the uterus, decidua serotina, on the outer, and prolongations, villi, from the chorion are pretty firmly attached between and around the lobules of the decidua. The space between the latter is very small, and contains some serous fluid, which he suggests may be thrown out from uterine follicles, which open through the decidua into this space. Each decidual lobule is supplied by a "curling artery," which breaks up in the centre into branches running toward the periphery, where proportionately large veins with most delicate walls return the blood to the uterus. It is by the rupture of these veins that Mr. Hicks accounts for the results of injections which have led to the general acceptance of the sinus theory.

TOPOGRAPHY.

Topographisch-chirurgische Anatomie des Menschen von Dr. Rüdinger (Brust und Bauch). Munich. 1873.

This volume comprises the first two parts of a large work on topographical anatomy. It treats of the thorax and abdomen. Besides having several wood cuts in the text, it is illustrated by many colored plates, taken from photographs of frozen sections and similar preparations. These plates are above praise; they are additional proofs of Rüdinger's great talent for demonstration. The horizontal sections through the thorax and abdomen are particularly instructive, and the vertical one through the fœtus, showing the relation of umbilical vein, the ductus venosus and vena cava are clearer than diagrams could be. Unfortunately, the illustrations are the best part of the work; the text is too meagre for a work of such pretension, and a reference to the plates is too often substituted for a definite description. The author divides the space in the middle of the thorax into a cardiac and supracardiac region and the posterior mediastinum. The first of these is defined by the pericardium, but no definite limits are assigned to the others. This, we think, is an omission, for even if such limits do not exist, purely conventional ones are valuable, as they enable us to place structures more accurately. In spite of imperfections, there is much to praise in the work, the description of the peritoneum is remarkably clear.

Bibliographical Notices.

A Guide to Urinary Analysis, for the Use of Physicians and Students. By Henry G. Piffard, A.M., M.D. New York: William Wood & Co. 1873. Pp. 86.

This little volume of Dr. Piffard's is a complete guide to the quantitative estimation of the most common constituents of the urine, and contains valuable rules for the preparation of all of the standard solutions necessary for the volumetric analysis of these substances, the third chapter being devoted entirely to the preparation of reagents for both the quantitative and qualitative analysis of the urine. The use, however, of the Troy system of weights throughont the book, instead of the metric system, which is universally used in all works relating to quantitative analysis, detracts somewhat, in our estimation, from its value.

For the determination of the color, Vogel's color table is recommended, although that table is not included in the work. Those physiological or pathological conditions which give rise to an increase or a diminution of the depth of color in the urine are not alluded to at all, nor, in fact, is the importance of variations in the amount of any of the normal constituents spoken of, an omission which diminishes very much the value of the book, designed, as it is, as a *guide* for the use of the medical student.

In regard to the estimation of urea, both Davey's and Liebig's methods are given, together with Dr. Flint's table for the calculation of the amount of urea from the volume of nitrogen evolved in the former method. The necessary rules and precautions to be taken in the performance of these analyses are accurately described, but the scientific explanation of the processes by a statement of the chemical changes which take place is utterly ignored. Heller's approximative method for the determination of urea is not mentioned, although approximative as well as accurate methods for the estimation of phosphoric and sulphuric acids and of chloride of sodium are given. The speedy method for determining a diminution of the chlorides by means of one drop of a standard solution of nitrate of silver, according to Heller, is also not mentioned.

In testing urine for albumen, the only test recommended is the heat test with the *subsequent* addition of nitric acid under the name of the "*heat* and *nitric acid*" test. But no allusion is made to the action of an excess of nitric acid alone upon albumen, which, when used in the proper manner, forms by far the most delicate qualitative test for albumen, and even the amount present in the specimen may be approximately determined by the thickness and opacity of the zone formed. Again, specimens of urine are sometimes met with, in which it is impossible to obtain a satisfactory result by means of the heat test; such specimens, for example, are turbid urines, which can not be rendered clear by filtration. Of the preparatory treatment necessary in such cases and the most advantageous test to be employed, no mention is made.

The appendix contains three tables. The first is a small table giving the average amounts of urea, uric acid, phosphoric acid, sulphuric acid and chloride of sodium in a fluid ounce of urine. The second is a table for the conversion of the degrees of the Fahrenheit and Centigrade thermometric scales into each other. The third is for the conversion of the millimetre scale to that of the English inch.

It is much to be regretted, that Dr. Piffard, who is eminently well qualified for the work, did not extend his volume so as to include an examination of urinary sediment (of which nothing whatever is said) together with the physiological and pathological significance of variations in the amount of normal constituents, instead of confining it, as he virtually does, to quantitative analysis. He could thus have given to the profession a complete guide to urinary examination, which is so sadly needed by the medical student, who is now obliged to resort to foreign works. E. S. W.

The Diseases of the Stomach. Being the third edition of the " Diagnosis and Treatment of the varieties of Dyspepsia." Revised and enlarged. By Wilson Fox, M.D., F.R.C.P., F.R.S. etc. etc. London and New York: Macmillan & Co. 1872. Pp. 236.

Any carefully written work regarding indigestion will always meet with favor, so constantly is the stomach brought to the notice of the physician by direct and indirect complaints.

Those individuals who pass through life unaware of the presence of this important organ are comparatively few, though many of them are pleased to be called " bilious " rather than dyspeptic.

The present edition of Dr. Fox's work is in part enlarged by the addition of chapters concerning gastric ulcer and cancer, originally written for and published in Reynolds's System of Medicine, and revised by the insertion of numerous references and observations relating to recent investigations.

The first part of the book describes the symptomatology purely, objective and subjective, the second and greater portion being devoted to special diseases, among which the neuroses occupy a prominent position. The evidence of system is pronounced, in consequence the book will yield rapid results to the physician who seeks an explanation of unfamiliar phenomena.

Where Dr. Fox speaks with positiveness regarding the effect of remedies, the reader may be assured that a critical comparison has been made between antecedent and consequent.

The first edition presented the results of a large amount of original work done in part, if we are not mistaken, in Virchow's laboratory several years ago. And referring more particularly to the pathological anatomy of the walls of the stomach, the reader will notice that the present edition does not lack in the treatment of this subject.

The book has evidently been written for the benefit of medical men, and is not likely to become the table-ornament of the fashionable parlor or the frequented club.

Though the subject, not the name, is popular, its treatment is thorough and detailed, a fact well worth observing at a period when pseudo-medical treatises seem to be written as advertising media for the author's benefit.

The Therapeutic Effects and Uses of Mercury as influenced by " The Report of the Edinburg Committee on the Action of Mercury, Podophyllin and Taraxacum on the Biliary Secretion. By Wm. H.

Doughty, M.D., Professor of Materia Medica and Therapeutics in the Medical College of Georgia, Augusta. Atlanta, Georgia.

The author of this pamphlet offers to the well known report of the Edinburg Committee, the well known objections which may be summed up by saying that experiments on healthy dogs are for practical purposes and, perhaps scientific also, less useful than clinical observation on sick men. He thinks that investigations upon the action of the liver are best made by a study of the fæces. Unfortunately, however, he does not give any more accurate method of conducting this somewhat repulsive inquiry than observation of the color, which, although it largely depends upon bilious coloring matter, is too complex a result to give accurate information upon its various factors. We hope the author will give in more detail his positive data and views upon the matter. We apprehend that, although much might undoubtedly be learned from examination of the fæces, yet, until this chemical analysis becomes less offensive and less difficult, the greater mass of clinical observation will lead to but somewhat vague scientific results on the subject.

BOOKS AND PAMPHLETS RECEIVED.

Thinkers and Thinking. By J. E. Ganetsen, M.D. (John Darby.) Philadelphia: J. B. Lippincott & Co. 1873. Pp. 254. (From James Campbell.)

Lectures on Madness in its Medical, Legal and Social Aspects. By Edgar Sheppard, M.D. Philadelphia: Lindsay & Blakiston. 1873. Pp. 186. (From James Campbell.)

A Manual of Practical Hygiene. By Edmund A. Parkes, M.D., F. R.S. Fourth Edition. Philadelphia: Lindsay & Blakiston. 1873. Pp. 667. (From James Campbell.)

Law and Intelligence in Nature, and the Improvement of the Race in accordance with Law. By A. B. Palmer, A.M., M.D. Lansing: W. S. George & Co. 1873. Pp. 31.

A New Substitute for Quinine.—The *British Medical Journal*, June 7, 1873, states that among the species of drugs exhibited in the International Exhibition at Vienna is the Echisses Scholaris, a plant of the natural order of *Apocyneæ*. It is especially abundant at Luzon, in the Philippine Islands; and its bark has long been used by the natives, under the name of *dita*, as a remedy in all kinds of fever. An apothecary in Manila has given the name of *ditaïn* to an uncrystallizable very hygroscopic substance which he has discovered in it. The principal Spanish physician in Manila, Dr. Miguel Zina, has given it to numerous hospital patients, and has found that ditaïn is not only a perfect substitute for quinine, but that its use is not followed by the disagreeable results which often attend the administration of the latter drug. It is given in the same doses and in the same way as quinine. In many cases, also, its activity as a tonic was well marked. The ditaïn is prepared from the bark in the same way as quinine from cinchona; 100 grammes of bark giving two grammes of ditaïn. A single tree yields a large quantity of bark without injuring its growth. It is calculated that the price of ditaïn in Europe would be about 3s. 6d. to 4s. per ounce.

Boston Medical and Surgical Journal.

Boston: Thursday, September 11, 1873.

The success of the forty-first annual meeting of the British Medical Association was even greater than had been expected. In addition to the number of distinguished foreigners who honored the meeting by their presence, the attendance of the members of the Association was so unusually large that the preparations for their reception proved to be quite inadequate. The large number of valuable papers read, and the character of the men who participated in the proceedings, speak well for the prosperity of the Association, which now seems to be at its height. The reports of the daily general meetings are replete with interest, and the smoothness with which they were conducted is in strong contrast to the tempestuous character of the meetings of our own unfortunate Association.

The exhibition of patients and the annual museum we have already alluded to; we find, also, an account of a series of interesting physiological experiments. The exceedingly diversified character of the proceedings is quite noticeable. Everything was done to make the sojourn of the visitors in the city as agreeable as possible, and hospitality on the part of the London members does not seem to have been wanting. Soirées and excursions were numerous. The annual dinner, which followed the close of the meeting, owing to the limited accommodation, was attended by a very small proportion of the members, and although honored by the presence of Mr. Gladstone and many other distinguished men, was not at all on the scale that it should have been on such an occasion. It was voted that the next meeting should be held at Norwich, and that Dr. Copeland, of that city, should be the president elect. The tone of the English press was highly appreciative of the Association and its work, "and discussed with mingled admiration and respect the great spectacle of an united profession associating through all its ranks on an equal footing, combining for public purposes in an organization which is purely representative, and pursuing a course self-reliant and influential for good."

The public has heard a great deal this summer about the unfortunate Miller's river, and, as is well known, the chief responsibility for this nuisance has been laid at the door of the slaughtering establishments in that neighborhood. We called attention lately to the fact that this matter, about which there has been so much dispute, was reported upon at length nearly a year ago by a commission most eminently qualified to express an opinion upon such a subject. The communication from Squire & Co., in to-day's issue, attempts to show that that portion of the commissioner's report relating to slaughtering establishments referred to practices of former years. The wording of the report on this point is very plain, and cannot, we think, be twisted into any such meaning. Mr. Squire, it will be seen, asserts, morever, that the causes in question do not exist now, and that the principal recommendations of the commission are being carried out. How far the smell from the wash of half a million of hogs slaughtered annually may be neutralized by the remedies which are now being applied remains to be seen.

The question of sewerage is, indeed, one of great importance to the city, intimately connected with its future growth and prosperity, and one full of difficulties, which are constantly increasing with every new filling, whether of Back Bay, Ruggles Street, or other districts. Moreover, it is closely associated with the drainage of surrounding municipalities. How far the condition of the extensive flats surrounding us, at low tide, in all directions, and the condition of the soil itself on which Boston stands, is affected by the present system of sewerage, is but one of the many questions relating to this important matter. We are far from feeling reassured by the report of the Committee on Sewers, and we think the sooner the whole matter is thoroughly investigated by competent engineers the better. It seems to be by far the most important sanitary question with which we in Boston have to deal.

A Case of Femoral Aneurism closely simulating Malignant Disease.—Dr. George Alexander Gloag, L.K.Q.C.P., of Bristol, England, reports the following case in the *British Medical Journal* for May 24, 1873:—

Edward P., aged 37, of a cachectic appearance, by occupation a pedlar, came under my care on November 5th, 1872, for the treatment of a tumor which occupied the anterior and inner region of the upper half of the right thigh. It was bounded above by Poupart's ligament, and had a circumference of 27¼ inches at its centre, the circumference of the sound limb at the same part being 16 inches. The tumor had a tense elastic feel and a shiny appearance, the superficial veins were enlarged and prominent, and the disease appeared to have involved all the structures of the limb. No *bruit* or pulsation could at any time be discovered in it. It gradually increased in size, and on December 20th had attained a circumference of 30 inches. The patient suffered intense pain, which was of a paroxysmal character, and required large doses of morphia or chloral for its relief. During severe pain I found that the tumor became harder, and that it increased in circumference to the extent of half an inch, and again subsided, as the pain diminished, to its former dimension. The limb was œdematous below the tumor, the result of venous obstruction. Although there were no glandular enlargements nor symptoms of secondary deposit, the cachectic appearance of the patient, the intense pain he suffered, and the rapid growth of the tumor, together with the total absence of pulsation or stethoscopic sound, induced me to believe the case to be one of medullary cancer, for which operative interference was unjustifiable. About six months previously to the time when the patient came under my notice, a tumor, about the size of a small egg, appeared on the upper and inner side of the thigh, accompanied with such severe pain that the patient was unable to follow his occupation, and was obliged to remain in bed. It grew rapidly from week to week, and the pain increased in proportion. A month or so after the appearance of the tumor, he obtained admission into the Bristol General Hospital. He remained there six weeks, during which time the tumor increased considerably in size, and was then discharged as an incurable case, the tumor being considered of a malignant nature. The patient remained at home about a month, at the termination of which time he was admitted a patient of the Bristol Royal Infirmary. His case being considered one for which nothing could be done, he was removed to his own home in about a fortnight. The patient had usually enjoyed good health, and his family history was good; but he had suffered from constitutional syphilis, and was discharged from the army in consequence of defective vision, the result of specific iritis. There were no evidences of heart disease.

The patient died on December 28th, and on the following day, Dr. Norton, Mr. Dobson and myself made an examination of the body. The knee was bent, the thigh everted, and free movement existed at the hip-joint. An incision was made from the anterior superior spine of the ilium to the symphysis pubis, and another from the centre of Poupart's ligament down the front of the thigh. The latter was afterwards prolonged across the inner aspect of the knee, so as to expose the upper part of the popliteal space. On making the longitudinal incision, the parts gaped widely, and a thin layer of muscular tissue was exposed. On dividing this the length of the thigh, a mass of clot presenting various shades of color appeared. Some of it was partly laminated and of a firm consistence, and needed the assistance of the knife for its removal. Nearly fourteen pounds weight of clot was turned out of the cavity, which was bounded anteriorly and to its sides by the skin, a small amount of subcutaneous fat, and a thin layer of muscular tissue; above by Poupart's ligament; below by the quadriceps extensor tendon; and behind by the eroded femur, the adductors and vastus externus muscles, in a partially disorganized state. The integument showed no symptoms of thinning in any part. The anterior crural nerve was found deeply imbedded in the clot, and was the only recognizable structure in the tumor. An incision was made from the middle of Poupart's ligament to the umbilicus, and thence to the sternum. The kidneys were in a healthy condition; the liver was enlarged, and showed appearances of waxy degeneration. On cutting across the aorta, and dissecting the external iliac artery downwards, it was found that an aneurism existed on the right superficial femoral artery. The femoral artery was then dissected upwards from the popliteal, as well as possible, to the tumor, and the mass removed for preservation. It consisted of a quantity of laminated fibrine, situated in Scarpa's triangle, where it appears to have burst, and this, I believe, took place before the patient applied for medical relief, at which time the tumor was localized, and about the size of two fists. The epigastric and circumflex ilii arteries were considerably enlarged. The upper part of the femoral artery leading into the tumor was pervious; that immediately below it and leading from it was impervious.

This case of diffused aneurism is, I think, worthy of record, on account of the close resemblance of its symptoms to those of malignant disease. If the nature of the tumor had been discovered during its early stage, an effort to cure it might perhaps have been made. This case clearly shows that cachexia, rapid growth and severe pain must not be accepted as sufficient evidence of cancer. In reviewing the history of this case, there are some points which should have suggested its non-malignant character; namely, the absence of lymphatic enlargements, or symptoms of secondary deposit, and of any tendency to ulceration of the skin over the tumor, the favorable family history and the fact that the tumor was definitely bounded superiorly by Poupart's ligament.

Transmission of Cholera by the Medium of Spring Water.—Dr. R. Förster of Breslau, in an interesting article on the communication of cholera, supports the theory that this disease is enabled to assume an epidemic form almost exclusively by means of the poisoning of the sources of wells. As a very conclusive evidence in proof of these views, Dr. Förster shows that there are about a dozen cities and districts situated in Silesia and Pomerania which have thus far escaped all epidemics of the disease. These localities are shown to have this alone in common, viz., that their supply of drinking water is brought from a considerable distance, wells being used to a very limited extent. One of the most striking illustrations of the correctness of this theory is afforded by the fortified town of Glokau, which is built upon both sides of the river Oder. The smaller portion of this town, lying upon the right bank of the river, was visited in 1866 by a severe epidemic of cholera, which carried off 1½ per cent. of the entire population, but which, however, did not extend to the section of the city occupying the left bank of the river. This latter section was ten times as large as the former, and was, moreover, in the immediate vicinity of the barracks in which were confined those of the Austrian prisoners who were attacked with the disease.

In the latter district, the drinking-water was brought from a distance; in the former, the water was obtained from local wells. In other towns which have shared a like immunity from this disease, it has been ascertained, that, although they possessed no water system, their wells were sunk to a great distance in rocks, and were in this manner effectually sealed from all contamination from adjacent privies. The author concludes that the secret of the immunity of the above localities from all cholera epidemics lies in their common system of introducing water from a distance, whereas the prevalence of epidemics in other places is to be ascribed to the transmission of the *materies morbi* from house to house by means of the contaminated water sources. The chief source of this contamination in large towns and cities must be the drinking-wells, which are commonly situated within a few yards of the privy, while numerous instances might be cited in which foreign matter has found its way into wells from a distance of several hundred yards.

The fact of the very common contamination of wells situated in large cities has been recently demonstrated by repeated analysis, in which there has been generally detected more or less ammonia, nitric acid and various organic matters.—*Allg. Med. Cent. Zeitung*, June 14, 1873.

THE EVILS OF HIGH-HEELED SHOES.—Dr. v. Rothmund, Sr. (Munich), writes us as follows :—

Who would gather violets must not be frightened by the pricking of the thorns, and if one has the courage to cast a lance he must not be frightened off by the women. I do not propose in this paper to distress the reader with a dissertation on the follies of female fashion, but I shall venture to call attention to a few points in connection therewith, and I commence now at the bottom. I have nothing to say then about corsets, upon which folios have already been written, but I have a few facts to bring forward about the clothing of the feet. The high heels lately introduced into fashion change the long axis of the body so that the trunk is directed backwards, and this of course alters the inclination of the pelvis. Such an alteration cannot be without influence upon conception and labor. I leave it to the obstetricians and gynæcologists to collect observations upon these facts. In my own experience I can bring forward one evil resulting from this *bizarre* position of the foot, viz., displacement forwards, even dislocation of the ankle joint. I had a case under treatment where a dislocation occurred as a result of the predisposition thereto by high-heeled shoes, and where the patient was confined to bed for three months, notwithstanding the best treatment that could be devised. Inflammation of the ligaments and the sheaths of the ligaments is much more frequently met with. Finally, an abundance of corns is a product of this shoe dress that is not to be overlooked. Indeed the corn doctors are the only ones benefited by this refinement of luxury. —*Wien Med. Presse*, June 15, 1873.

COLD INFUSION OF GREEN COFFEE IN GOUT.—Dr. Monchaux communicates to *L'Abeille Médicale* his experience in the use of cold infusion of green coffee in the treatment of gout. He directs his patients to take a table spoonful of green coffee, place it in a tumbler, half fill the latter with water at the temperature of the atmosphere, and allow it to stand for twenty-four hours. In the morning the liquid is to be swallowed, an equal quantity of water added, and taken the following morning; thus the same quantity of coffee will serve for two doses. The liquid thus obtained has little savor; it is more or less distinctly green according to the species of coffee employed. Dr. Monchaux does not explain the mode of action of the remedy upon the uric diathesis. He inclines to the belief that it acts against the effects of the disease rather than on the disease itself, and that, in order to prevent a recurrence of gout, it is only necessary to make a daily use of the remedy indicated by him. He observes that the remedy is an old one, and that, however difficult it may be to explain the precise action, the efficiency of the remedy is acknowledged. He had himself used it during three years, and with the result that his biannual attacks of gout had completely disappeared.—*The Doctor.*

New Method of Performing the Operation of Lithotomy.—In the June number of the *Edinburgh Medical Journal,* Dr. Davidson, Physician to the Queen of Madagascar, gives an interesting retrospect of the recent history of lithotomy, and describes a new mode of operation which he has adopted. The staff employed is a modification of Buchanan's rectangular one, the acute angle being replaced by a gentle curve, and grooved in its inner aspect. The form of the external wound is semi-lunar, curved somewhat lower and deeper upon the left side than on the right, in order to afford a freer drain in the side on which the prostatic wound is situated

"Having exposed the membranous part of the urethra, this is opened, and a guide is introduced along the groove in the staff into the bladder. This guide, consisting of two parallel and connected bars or blades, capable of being separated by means of a screw, forms, when approximated, an instrument about five inches long, somewhat like a female catheter in size, straight, slightly flattened from above downwards, and grooved on the left side so as to permit the bottom point of the knife to slide along without escaping from it. When this guide has been fairly introduced into the bladder, the staff is withdrawn, and the blades are separated by the screw *to such an extent as to render the tissues tense.* The knife used has a button-shaped extremity to fit the groove in the guide. The blade is narrow throughout, but is slightly triangular, becoming a little broader towards the handle than at the point. This knife is then carried along the groove so as to divide the tense resisting structures, *by its edge being brought into contact with them rather than by actual cutting.* The blades of the guide are now expanded to a sufficient extent. Should it be found, however, that the required degree of separation cannot be effected without force, the knife may be passed along a second time to cut the structures that still resist. In no case should anything be incised, except what is found to oppose gentle dilatation. The size of the calculus determines the extent to which the knife is to be used and dilatation effected.

"The blades of the instrument having now been separated so far as the size of the stone seems to demand, it serves as a conductor for the forceps into the bladder. They slip along bewteen the blades of the instrument. The stone is then extracted in the usual way. Should the calculus be very large, the knife may be applied in precisely the same manner to the right side of the prostate, thus making a bilateral incision."

The chief advantages of this, as compared with other operations, are the following: 1st. The incision is an exact and *discriminating* one, and both the incision and the dilatation are in proportion to the size of the stone and the resistance of the tissues.

2nd. The introduction of the forceps is simplified, the guide for knife serving at the same time as a conductor for the forceps.

3d. Some of the special accidents of lateral lithotomy are less likely to occur in this operation. Among these accidents may be enumerated troublesome and even fatal hæmorrhage; inflammation of the neck of the bladder and pyæmia, caused by bruising; infiltration of urine and pelvic abscesses, the result of too extensive incisions.

Dr. Davidson concludes his valuable paper with the statistics of results thus far obtained in this operation, the patients operated upon showing a very small rate of mortality.

"Mixed Medical Classes."—Judge Ardmillan's opinion, in the Edinburgh cases.

"I fully and respectfully recognize the high qualities, capacities, and vocation of women. I recognize, especially, the fact, that the elevation of women in domestic and social position, is one of the blessed fruits of Christianity. There are few, indeed, who hold intelligent and virtuous women in higher estimation than I do. It is very much for their own sake, and on account of the respect which I entertain for them, that, on this particular point, I feel it my duty to state my decided opinion, that the promiscuous attendance of men and women in mixed classes of medical study, such as anatomy, surgery, and obstetric science, with concomitant participation in dissection, demonstration, and clinical exposition, is a thing so unbecoming and so shocking—so perilous to the delicacy and purity of the female sex, to the very crown and charm of womanhood, and so reacting on the spirit and sentiment which sustain the courtesy, reverence, and tenderness of manhood—that the law and constitution of the University, bound to promote, and seeking to promote the advancement of morality as well as knowledge, cannot sanction or accept such attendance." —*London Med. Times and Gaz.*, July 5, 1873, p. 11.

Correspondence.

How to make Liebig's Soup for Babies.

The value of this soup, prepared according to Liebig's directions, is not fully appreciated in this neighborhood, partly, perhaps, because it is not often tried, and partly, no doubt, because it is supposed to be the same thing as the so-called Liebig's Food which is put up in tins by Savory and Moore. It may be that there is some way of preparing Savory and Moore's powder so as to make it palatable and digestible. But, although H. R H Prince Albert Victor throve on it well (vide advertisements), it must be confessed that, prepared according to the directions given, it is not very palatable, and, as far as my experience goes, not particularly digestible. The receipt for Liebig's soup is given in several books in English, but entirely without the details of the process, so that one only finds out how to prepare it well and quickly after a good many experiments. I feel sure, however, that, if the detailed directions which I give below are strictly followed, the soup will be made without difficulty.

(A.) One measure of malt, mixed with one measure of solution of bicarbonate of potash, should be left to stand half an hour.

Malt, ready ground, may be obtained of beer-brewers, though they do not make a business of selling it; it may well be sifted through a coarse sieve, to remove the largest hulls. It is well to buy bicarbonate of potash in half-ounce packages, and dissolve one package at a time in one quart of water. A large wineglass, or small teacup, aaswers conveniently for a measure.

(B.) Make a porridge of one measure of flour in five measures of milk.

To avoid lumps, mix a part of the milk with the flour first, and make it perfectly smooth before adding the rest of the milk. The flour should be of as coarse a quality as can be obtained.

It is not very easy to boil the porridge enough to swell the starch thoroughly and yet not burn the mixture. The most convenient vessel is a milk- or farina-boiler, though any two vessels of such sizes that one will make a water-bath for the other will answer the purpose. It is easier to swell the starch thoroughly by having but little water in the water-bath and depending on the steam for heating, than by having so much water in the bath that the smaller vessel will dip into it. If there be a fire of hot coals at hand, it is well to make sure that the porridge is thoroughly boiled by taking the vessel which contains it out of the bath and letting it stand on a toasting rack over the hot coals, but not touching them. It is less likely to burn in this way than if put on the iron surface of a range or stove.

(C.) Let both the water-bath and the porridge cool down to about 140° or 150°, add the malt and potash slowly while stirring, and let it stand at the above temperature fifteen or twenty minutes, when it becomes thin and sweet.

When the porridge has been thoroughly boiled, it is best to fill up the water-bath, so that an even temperature can be maintained. It is certainly possible to get along pretty well without a thermometer, remembering 150° is very hot, but not boiling. Many failures, however, will be prevented by using a thermometer, which can be prepared easily from one of the ordinary, cheap thermometers which are used in dwelling houses, by drawing it out, together with the metal scale, from the black frame, and cutting off so much of the scale with strong scissors that the glass part only will dip into the porridge. If the soup does not now become thin and sweet after standing fifteen or twenty minutes, some mistake has been made.

(D.) Boil it up once and strain it through a sieve and then through muslin.

If it were not boiled up this last time it would sour readily, but, when boiled, it keeps twenty-four hours perfectly well,

(E.) Dilute it with an equal quantity of water for a young child, and gradually increase the strength till the child is eight months old, when it may be taken in full strength.

It should be diluted only just before using, and kept in a perfectly cool place.

CH. P. PUTNAM.

MILLER'S RIVER.

MESSRS. EDITORS,—We heartily rejoice that our recent petition to the Board of Aldermen has attracted attention from so high an authority as your JOURNAL, and that you have given it the favorable notice apparent in your article on the subject published on the 21st inst. It is highly satisfactory to us when we read that you "sympathize strongly with Mr. Squire's views on the subject of the drainage of Boston and its vicinity." Also, that you perceive that "the danger and expense there (London, Eng.) incurred will sooner or later be inevitably visited upon us." Furthermore, that you deem "this subject of general drainage quite as important a matter to the city as the remedies to be applied to Miller's river." Your allusion to our "motive" in presenting the petition we need scarcely remark upon. No one can know that motive but ourselves, and we know that the only object which we had in view was to direct attention to the *true* causes of the vapors and odors which afflict the vicinity of Boston. We know that those vapors and odors do not emanate from the slaughter houses, as has been so often alleged, but that Boston, at least, can find the origin of her troubles nearer home. Motives are of little consequence; but facts are all-important.

You notice our statement, that "no board of health, committee on health, grand jury or other official body has ever been able to fix upon the slaughter houses the stigma of having originated or produced the offensive smells or deleterious vapors;" and you point out the fact that the joint commission of last year did attribute to those establishments a large share of the responsibility of making Miller's river what it is. That commission said, in effect, that the sewerage of Cambridge and Somerville contributed somewhat; that the filth brought by the in-coming tide was there precipitated, thus adding to the general result; but that *mainly* from the use made of the basins by the slaughtering establishments was the nuisance produced. There is an apparent contradiction here to what we stated as to official bodies fixing the stigma of producing the nuisances upon the establishments referred to, but we think that it is only *apparent*, and not real. The commission was evidently considering the condition of the river bed, and the causes which had accumulated thereupon a vast body of filth; and, in the opinion of the members of the commission, it was the discharge of blood and other matter from the slaughter houses (we think they must have meant *in past years*), which had gone far to make the territory a mass of corruption. While we may respectfully differ with the commission as to that point, we do not propose to discuss the subject here and now, and we desire merely to say that the causes alluded to by that honorable board have entirely disappeared. The blood, and all other things which would be likely to pollute the stream or the river bed, are now carted away to distant places, every day, and thus can no longer (if they ever did) contribute to the production of nuisances. Admitting, for the sake of the argument, that the commission was right in saying that the river bed had become what it had by reason, *mainly*, of the use made of the basins by the slaughtering establishments, it is still true, as stated by us, that no official body had ever fixed the stigma upon the establishments themselves of originating or producing the offensive odors. They may have done something in past years (not now) to make the river bed filthy, but the establishments themselves do not originate or produce deleterious vapors and discharge them into the atmosphere, and no official body has ever been able to say that they do. In other words, the slaughter houses may have helped, in the past, to befoul Miller's river, but they are not to-day doing either that or anything else which should subject them to public animadversion, or to destruction by the State Board of Health. As you are well aware, the filling of the river is rapidly going forward, the sewers will soon be commenced, and thus the principal recommendations of the joint commission are being carried out. When these methods for the abatement of a great nuisance are fully completed, it will be time to turn attention to the further recommendations of the commission, which is, " to enforce those sanitary principles which the Commonwealth has already adopted with reference to industries of the class peculiar to this neighborhood." If, after the filling has been done and the sewer constructed, there is still a nuisance, and that nuisance can be traced to the slaughter houses, then, we say, with the whole community, abolish the business so far as that vicinity is concerned. We have perfect confidence, however, that no such day will ever arrive.

But the main object of this letter is to urge you to do all in your power to secure proper attention on the part of the authorities of Boston to the great subject of a better system of sewerage than now exists in this city. It is the province of your Journal to deal with all matters relating to the public health, and whatever you say on that most important topic will be considered as coming from the highest authority and entitled to the greatest weight. It is not for us to instruct you in regard to a subject which you have doubtless studied far more closely than we have, and which you doubtless understand in all its details; but we are deeply impressed with the potent fact that there has been great neglect and judicial blindness in quarters where diligence and foresight should have been shown, and it is apparent that much discussion of a very forcible character must ensue before anything effectual will be done to remedy the vast evils which at present exist. One of the greatest dangers is that the evil odors which frequently afflict the residents of Boston will continue to be (as they have been in the past) attributed to causes which are not at all responsible for them. Miller's river may, if you please, be a stupendous cess-pool of filth, poisoning the whole adjacent atmosphere, but it should not be made the scape-goat for the sins of other localities quite as detestable; and so long as it is thus made the scape-goat, will public attention be diverted from causes of discomfort and disease which ought to be forthwith removed. As it is now, the residents of the west end of Boston frequently attribute to Miller's river sickening and disgusting odors which never could have emanated therefrom. They could not have come from there for the simple but sufficient reason that, at the time they were perceived, the wind was from an almost directly opposite quarter and blowing freshly. A brisk south-west breeze will bring from the flats of Charles river and from the filthy waters of that stream (as they *are* at low tide) perfumes that are not at all agreeable; but nothing from Miller's river could, by any possibility, reach any part of Boston on the wings of such a breeze,—and yet it is a common remark on such occasions that "here we have Miller's river and those confounded slaughter houses!" Of course it is useless to attempt to abate a nuisance until its cause is ascertained and its place of production discovered.

There is a very large section of the city of Boston draining into Charles river. The tide-gates keep the sewers closed for hours at a time, or until the tide falls sufficiently to enable the pressure of sewerage behind to open them. During these hours, an immense mass of filth must accumulate in the sewers, and the manufacture of deleterious gases is going on with great rapidity. These gases will find their way out somewhere, and it is one of the problems of the age to contrive some effectual way of preventing them from backing up into the habitations of men and working destruction to health and life. Where the outlets of the sewers open, the sewerage pours out into the river in a copious stream of nastiness, contaminating the water and destroying the purity of the air which holds the gases in suspension.

It is worthy of notice that these vile odors always occur at the time of lowest tide. In certain states of the atmosphere—happily not very frequent, —the vapors float at a very moderate height above the surface of the ground, and it is then that we perceive the havoc which it is their mission to work. We perceive them by the evidence of more than one of our senses; for they affect the nostril by their pungent odors, we see the result of their action upon newly painted buildings, and we can almost feel and taste them as they invade our domiciles. Sometimes they last for hours, banishing all comfort and endangering life, but more frequently they depart within a comparatively short time, and as mysteriously as they came. The peculiar condition of the atmosphere seems to have a vast deal to do with their becoming perceptible to human organs, and, as these conditions are exceedingly variable, no surprise should exist that the results are variable also. Probably, at most times the gases rise high in the air and float away, doing no harm to anybody or anything, but occasionally their flight is low, and it is then that they attack mankind and make us all miserable.

However this may be, there should be no pains or expense spared to make these inflictions impossible. By a better system of drainage, and by a thorough supervision over all places where water is likely to accumulate and become stagnant, nearly the whole of these evils may become things of the past. As we have said, Boston is constantly befouling Charles river; Cambridge, Watertown, Brighton and Brookline are helping Boston. In Cambridge, only just over West Boston bridge, there is already a sink of corruption called Broad Canal, into which two of the largest sewers of that city empty. This canal connects directly with Charles river! All these causes of unwholesome influences are not only now in existence but are growing from day to day, from month to month and from year to year. They *demand* attention, and we ask you, as the guardian of the public health, to cry aloud and spare not! Speak of Miller's river if you will (remembering that it is being filled, however), but speak still more loudly of worse nuisances. We thank you for your article of last week, but many more just like it will be required before the great and much needed reform is brought about. Public attention has too long been fixed upon one spot, and that not the one which is doing the most harm, and every exertion should be made to ascertain true causes and apply true remedies. JOHN P. SQUIRE & CO.

Boston, August 25, 1873.

Medical Miscellany.

APPOINTMENT.—Dr. F. H. Gerrish, of Portland, has accepted an invitation to deliver a six months' course of lectures on materia medica and physiology in the Medical Department of the University of Michigan.

MR. ERICHSEN, the distinguished London surgeon, is now sufficiently recovered from his illness to appear in professional circles again. He will be prepared to commence work in October at University College.

THE announcement of the death of Nélaton, according to the *France Médicale*, is incorrect. The illustrious surgeon is, however, still very ill.

THE Strasburg Gazette announces that the female medical students, lately forbidden to attend the courses of the Zurich medical school, have applied to the university of Strasburg for permission to follow their studies there. The medical faculty has refused to receive them.

COD-LIVER OIL BREAD.—M. Bouchut, according to the French journals, has attempted to disguise the unpleasant taste of cod liver oil by combining it with flour in the form of bread. This bread is not at all disagreeable to the taste, and the results of M. Bouchut, from an experience of several weeks, are very encouraging.

BELLEVUE HOSPITAL MEDICAL COLLEGE.—Dr. W. A. Hammond has resigned his professorship. Dr. Janeway is to give the course on materia medica and therapeutics, in addition to the course on pathological anatomy. The diseases of the nervous system will be treated of by the Professor of the principles and practice of medicine.

DR. SCHWEIGGER has been appointed Professor of ophthalmology in the Royal University of Berlin. The Universities of Göttingen and Griefswald are now the only German universities where professorships of ophthalmology are not established, and it is expected that these will soon follow the example of the others.—*Berliner Wochenschrift.*

THE trustees of Jefferson Medical College having requested Professor Joseph Pancoast to withdraw his resignation of the Chair of Anatomy in that institution, he has complied with the request, and will discharge the duties of the chair during the ensuing session.—*Medical Times.*

THE *Medical Times and Gazette*, in speaking of the late outbreak of typhoid fever, says "there is no evidence that the germs of a specific disease, such as typhoid, can be taken into the cow's system through the channel of sewage grass, be thence excreted by the mammary glands, and, producing no toxic effect upon the cow, can spread enteric fever amongst the children who drink the milk. Such a sequence of events is most likely impossible; but, if possible, there has been no outbreak of fever or other disease in this country which would warrant us in believing that it has taken place."

THE practical working of the theory of Dr. Hammond is seen in the case of David Montgomery, an epileptic, recently tried at Rochester, N.Y. It was proved that he was insane from recent convulsions for several days before the homicide; but, on Dr. Hammond's testimony that he was conscious at the time, he was convicted and *sentenced to be hung.* Drs. Gray and Cook testified to the familiar fact that epileptics often talk and act quite rationally for several days, being meanwhile really insane, and are afterwards entirely unconscious of what has passed, and denied the responsibility of the prisoner. The case was pending for a year and a half, the execution being postponed, until, finally, the prisoner became so evidently and completely demented as to require his commitment to the asylum for insane criminals at Auburn.—*Medical Times.*

In the catalogue of the medical department of Syracuse university are to be found the names of several lady students.

A circular has lately been issued "to the surgeons (Field and Hospital) of the armies of the late Confederate States," calling a convention to meet in Atlanta, Georgia, May 20, 1874. Its object is the advancement of science—"to rescue from oblivion all the important medical and surgical facts developed within the armies of the Confederate States during the late war." Since the war, many of the most talented of the medical staff have died, and their valuable experience lost to the profession. The circular further states: "for the success of this great scientific and historical association it is earnestly recommended that the ex-confederate surgeons of each of the southern States at once take such steps as will secure a large delegation. The co-operation of the medical staff of the late confederate navy is respectfully solicited. Besides the contributions to science, the social features of this organization—the revival of old army associations—will be of no secondary interest. The railways of the south, with their usual courtesy, will no doubt grant excursion tickets for this most important occasion." This call is based not only upon the action of the Georgia Medical Association, but on the solicitations of many confederate surgeons throughout the south. We hope this convention will have the good sense not to follow the example of a certain society which met in Virginia lately.

NOTES AND QUERIES.

Messrs. Editors,—I saw, in the Boston Medical and Surgical Journal of April 17, 1873, an article from F. B. Lewis, M.D. Harv., giving his experience in the excision of an elongated uvula, with probe-pointed scissors, with semicircular cutting edges, so as to embrace the uvula whilst closing it, made at *his* suggestion by W. F. Ford, New York. I want to say that I invented, and had made by Leach and Green, Boston, Mass., in July, 1868, a pair of long, thick, probe-pointed uvula scissors, curved near the points edgewise, so as to make semicircular edges that completely grasped the uvula before cutting it, and have used them ever since. I wrote a description of them to Prof. Lewis A. Sayre, of New York, about the same time. I presume Messrs. Leech and Green will make scissors at any time, from the *same* pattern, for any surgeon. N. L. Folsom, M.D.

Portsmouth, N. H., August, 1873.

E. C. D., a subscriber to the Journal, wishes to know the best work containing the latest and most reliable views on the treatment of diabetes.

Died,—At Canton, Sept. 6, of typhoid fever, Thomas W. Flatley, M.D., aged 30.

Mortality in Massachusetts.—*Deaths in sixteen Cities and Towns for the week ending August* 30, 1873.

Boston, 170—Charlestown, 26—Worcester, 19—Lowell, 36—Milford, 3—Chelsea, 10—Cambridge, 15—Salem, 11—Lawrence, 8—Springfield, 11—Lynn, 20—Fitchburg, 3—Newburyport, 12—Somerville, 8—Fall River, 25—Holyoke, 8. Total, 385.

Prevalent Diseases.—Cholera infantum, 110—consumption, 39—dysentery and diarrhœa, 23—typhoid fever, 10—scarlet fever, 13.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, Sept. 6th, 176. Males, 90; females, 86. Accident, 2—apoplexy, 3—inflammation of the bowels, 1—bronchitis, 4—inflammation of the brain, 1—congestion of the brain, 1—disease of the brain, 4—cyanosis, 1—cerebro-spinal meningitis, 1—cancer, 4—cholera infantum, 38—cholera morbus, 2—consumption, 21—convulsions, 4—croup, 1—debility, 2—diarrhœa, 10—dropsy, 2—dropsy of the brain, 1—drowned, 1—dysentery, 2—diphtheria, 2—epilepsy, 2—scarlet fever, 10—typhoid fever, 5—bilious fever, 1—disease of the heart, 4—homicide, 1—intemperance, 1—disease of the kidneys, 5—disease of the liver, 2—congestion of lungs, 3—inflammation of the lungs, 5—marasmus, 13—noma, 1—old age, 3—premature birth, 5—puerperal disease, 2—stricture of the urethra, 1—teething, 3—unknown, 1.

Under 5 years of age, 97—between 5 and 20 years, 10—between 20 and 40 years, 29—between 40 and 60 years, 20—over 60 years, 20. Born in the United States, 128—Ireland, 32—other places, 16.

THE

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Original Communications.

NOTES ON SOME CASES OF CEREBRO-SPINAL MENINGITIS.

By B. D. Gifford, A.M., M.D., Albany.

Read at the Annual Meeting of the Barnstable County Medical Society.

On Monday, March 24th, 1873, I was called to see Mr. C. E., a man about forty-eight years of age. He had been taken with chills and was then suffering from an intense pain in the back of the head and upper portion of the spine, with a hot dry skin, and pulse about eighty-five. There was severe pain in the knee and hand. On Tuesday, there was some swelling of the knee, and the middle knuckle of the hand was swollen, red and very tender. His intellect was perfectly clear. At the same time at which I saw this patient, another member of the family, a boy five years old, was also taken sick. He was seized with severe headache and vomiting. He had a small, rapid pulse, hot dry skin, cold extremities, gastric irritability and urgent thirst; a crop of purpuric spots covered his whole body; they were not raised above the skin and did not disappear an pressure. Very active delirium was present, with no knowledge of surroundings. The next morning, Tuesday, both the father and son remained in the same condition. Large quantities of morphine scarcely seemed to relieve the agonizing pain which the man suffered; he had no delirium then. On the evening of this day, I found them both with their heads drawn forcibly back against the spinal column, and it was not till then that I recognized the terrible character of the disease with which I had to deal and pronounced it cerebro-spinal meningitis. On Wednesday, Dr. Seabury, of Orleans, saw these patients with me and confirmed the diagnosis. The man had gone on rapidly from bad to worse; delirium set in with involuntary dejections. There was great restlessness with a constant desire for change of position; and he was moving about perpetually, seeking rest and finding none. The head was drawn so forcibly back that swallowing was difficult and painful. The cervical muscles and upper portion of the spine were extremely tender. He gradually passed into a comatose state, with dilated pupils, loss of the power of swallowing and labored breathing, and died on Sunday night, one week from the attack. No eruption was noticed on this patient. Early on Thursday morning, the fifth day of the boy's illness, I was called to see him on account of his violent delirium. I found him screaming at the top of his voice, and exerting so much muscular power that it required a strong man to restrain him from throwing himself from the bed. His head was resting on the spine and the spine curved upon itself. I immediately subdued him with ether, and held him so till under the influence of an opiate. On Monday, May 31st, there was strabismus, one pupil being much larger than the other; considerable delirium with occasional intervals of intelligence. Neck forcibly retracted; extremities cold; pulse 110. Tuesday, April 1st, pulse 120. Intellect better; strabismus, with ptosis of left eye-lid, mild delirium; not much pain in head, respiration 30. The tongue, which had been covered with a white fur, and which, by the way, in all the cases which I have seen, was broad, tremulous, with a white coating and with the papillæ projecting through it, had begun to clean from the edge.

On Saturday, 5th, there was an increase of the brain disturbance as shown by more violent retraction of head and by lack of intelligence; the pulse was 120. The day following, the pulse was up to 136. There was complete deafness and blindness. When his body was not touched, he seemed utterly oblivious of externals, lying on his side in a perfect stupor; his pupils, however, showed some reaction to a bright light.

The cutaneous sensibility was greatly exalted; the lightest possible touch disturbed him. He seemed to want to be let entirely alone. He continued in much the same condition from day to day, one day worse, the next better; at times refusing all food and medicine, taking it into his mouth and spitting it out again. The blindness continued for several days; the hearing gradually improved. April 21st, twenty-ninth day of his illness, his pulse was 96, spinal irritation subsided and his neck was flexible; some strabismus, with great improvement in strength and intellect. From this time on, he slowly but steadily improved. His intellect was at first very weak, and all voluntary motions were uncertain and wavering. Fear has been a symptom almost constant with him. Seeing some imaginary object, he would begin to cry and dart under the bed clothes. It was impossible, latterly, to induce him to lie in the bed, so that for the last three weeks he has been almost all the time in the nurse's arms. His pulse is now very slow, not above 70, sometimes much less. Tongue perfectly clean; he will take nourishment freely, chiefly milk. Has his clothes on and seems fairly on the road to recovery.

The bowels have been very constipated throughout, no dejection being obtained except by cathartics.

I have two other patients in this same family, now sick with the same disease, but for the present will forbear mentioning them, except with regard to treatment. This has been conducted on general principles. During the early stage of the disease, when there was great vascular excitement, with pain in the head and spine, I have used veratrum viride with bromide of potassium, and cupping at the nape of the neck and between the shoulders, followed by blistering. No measure has afforded so much relief to the cephalalgia and delirium as cupping to the extent of from 1 to 2½ ounces of blood. The delirium would cease, for the time, and the patient drop asleep. As the activity of the disease declined, I have administered full doses of quinine (and at times ammonia) and iodide of potassium, keeping up counter-irritation with cantharidal collodion. During the whole of the disease, I have fed my patients regularly with egg-and-milk mixture, beef tea, gruel and plain milk, together with stimulants. I have found nothing approach hydrate of chloral as a sedative agent; morphia can scarcely be named with it. In one of my patients, the latter not only did not quiet the pain, but made her wild with excitement, though used liberally, while fifteen to thirty grains of chloral would cause a quiet, refreshing sleep, with perfect relief to the pain. No praise, however extravagant, would seem too great to bestow upon this drug for quelling the excitement and procuring sleep in this disease.

With regard to the etiology of epidemic cerebro-spinal meningitis, there cannot be much said positively; but my researches in the four cases which I have had lead me to have some strong surmises. That it is a true blood-poison, I think is indisputable. The manner of its onset by chills, gastric irritability, eruptions, &c., with great depression of the powers of life, point to this. The fact, also, that four members of one family were seized, one after another, all within a week, with the same disease, points to some cause to which they had been subjected in common. Commencing my investigations with these premises, I found that they lived between two hills, or rather on the side of one of them. Between the hills, to the south, was a low, swampy marsh, while on the crest of the other hill was an old burying groud. A short distance east of the swamp was a pond, which was supplied largely from the swamp. There was another pond south of the graveyard, and another at the foot of the hill to the north. The family in which the disease appeared, has always used water from the pond near their house, which receives the drainage from the southern sides of this graveyard. The pond west of the yard has furnished water to two families located on either side of the pond; and the pond at the foot of the graveyard, on the north side of the road, has supplied a family living on the brow of the hill. There has occurred precisely what we might expect with our knowlege of the etiology of typhoid fever. In every one of these families, as far as I can ascertain, typhoid has prevailed. I myself attended one patient who died of it while a resident of one of these houses; and of the four patients with cerebro-spinal disease, two have had typhoid, one of them being the man recently deceased. Hence, I am forced to ask if the use of water, impregnated with decaying animal matter, has not been the cause of the spinal disease in these patients. The unusual falls of snow during the past winter, and the consequent large amount of water which has percolated through this graveyard and found lodgment in the pond, must have taken up considerable quantities of waste animal matter; and hence it seems pertinent seriously to inquire whether cerebro-spinal meningitis, in an epidemic form, does not depend essentially upon the same poison that generates typhoid fever.

REMARKABLE NERVOUS PERTURBATION.

From a paper presented to the Medical Society of the State of New York, by C. A. Robertson, M.D., M.M.S.S., Member of the American Ophthalmological Society, Ophthalmic and Aural Surgeon at St. Peter's Hospital, Albany, and at the Troy Hospital.

The following case illustrates a curious reflex nervous action, and the phenomenon presented is, I believe, quite *sui generis.* Mrs. S., aged fifty years, was operated on for the removal of a senile cataract in the right eye. Patient was healthy, rather below medium size, and mentally a little sluggish. Her eyes were small and deeply set, with shallow anterior chambers.

A lower section of the cornea was made with Beer's knife, and, in order to secure ample room for the lens to make its exit with facility, the section was effected well in the sclero-corneal junction. After the removal of the cataract, which was readily accomplished, the corneal flap came nicely into apposition.

At the expiration of a week, during which time the patient had been kept very quiet, and before the eye-lids had been separated in order to ascertain the result of the operation, the patient began, for the first time, to complain of pain in the eye. On examination of the eye, union of the corneal flap was found to have taken place properly, but the iris was seen to be badly inflamed. Owing to the intolerance of light, no attempt was made to determine the degree of vision. The pain that had set in at this time increased, and was, from time to time, excessively severe. The malady, an *irido-choroiditis,* resisted for weeks every means employed for its mitigation.

Early one morning, she sent for me, and, on visiting her, she complained that she was suffering from a most intolerably noisome stench. She seemed unable to find language strong enough to express her disgust for the foul odor that tortured her, but the anguish portrayed on her face supplemented the narration which her tongue inefficiently essayed.

She said that an unpleasant smell commenced the previous evening, and gradually grew stronger and stronger, until now she could bear it no longer and live. She could compare it to no smell she had ever known before, for it was worse than all conceivable bad odors combined, she said. As there was no unpleasant odor in the apartment, perceptible to any one else, this was at once regarded as a subjective sensation, referable to a reflex excitation of the olfactory nerve; in other words, it was a neuralgia in a nerve of special sense, and was undoubtedly aroused by irritation of the ciliary nerves consequent upon the operation.

In order to deliver her from her mephitic torture, at least temporarily, I made a hypodermic injection of a solution of sulphate of morphia into the arm. She soon fell into a tranquil sleep, which lasted three or four hours. When she awoke, the detestable odor was gone, and did not afterwards re-appear.

Hysterotomy versus Dilatation.—It is not many years since the introduction of the hysterotome, or some cutting equivalent, for the treatment of mechanical dysmenorrhœa and other uterine disturbances. And never operation so popular. Every woman who could get up a uterine sensation—and very few were unable to do so—was content only when her womb was under daily training with glittering instruments of cunning form. Fashionable ladies divided their time between the milliner and the gynæcologist, and this latter gentleman, when he had forced his way through the entrance of the matrix, *vi et armis*, felt he had done his country as much service as a United States soldier who should scalp a Modoc. Then came rumors of hæmorrhage, and of cellulitis and peritoneal inflammation. Then came doubts and misgivings, and a disposition to back down from the knife to the old method of dilatation—Simpson, we believe, leading the way and confessing that he had shed needless blood. So the hysterotome was threatened with ignominious discharge, like the lancet. Now comes Dr. Percy Boulton, and reads to the Harveian Society of London (*Obstetrical Journal* for April) an elaborate paper in defence of cutting as against dilatation. He adduces 900 cases operated on by Sims, Emmet, Greenhalgh, Tanner and himself, with only one death, and that in a patient who had tubercular peritonitis previous to the operation. The danger is from hæmorrhage and cellulitis. In 100 cases operated on by Dr. Tanner and himself, hæmorrhage occurred but once, and was easily arrested, a good recovery following; cellulitis never occurred. In 500 operations by him and Emmet, cellulitis occurred but once. In 300 cases by Greenhalgh, one had profuse hæmorrhage, which was relieved by plugging; five had cellulitis, and one fatal peritonitis, as already referred to. Inflammation, says Dr. Boulton, is no more likely to follow cutting than dilatation. On the contrary, the parts being in many instances congested, irritated or inflamed, incision is the appropriate remedy, and gives relief where dilatation would increase the difficulty and danger. Besides, simple dilatation often fails of a permanent cure, just as the extreme dilatation of childbirth is followed by a return of stricture. Dr. Boulton related six cases in which he had both cured dysmenorrhœa and sterility by hysterotomy, after the failure of the other method. In conclusion, he stated that, " although he did not consider the process as a universal panacea for every ailment of woman, and should not run into the extremes that Dr. Henry Bennet had lately indicated as possible, he was nevertheless of opinion that, in proper cases of mechanical dysmenorrhœa, hysterotomy was the most satisfactory mode of cure."—*Pacific Med. and Surg. Journal.*

Progress in Medicine.

REPORT ON THERAPEUTICS.

By R. T. Edes, M.D. Harv.

Alcohol.

Rabow *(Inaug. Diss.,* Strasburgh, 1872, and *Centralblatt,* 1873, 336) tries to show, in opposition to previous experiments of Binz and Bouvier *(Centralblatt,* 1871, p. 801), that alcohol does not prevent a febrile rise of temperature. He reports a case of peritonitis from perforation, in which the temperature rose from 38·8 C. to 38·9° within four hours, notwithstanding the administration of thirteen tablespoonfuls of Hungarian wine (equalling about three fourths of an ounce of absolute alcohol, or an ounce and a half of brandy). This result can hardly be regarded as astonishing, or as furnishing any strong proof against the views previously held. He also took one or two tablespoonfuls of brandy, or twenty-five c. c. of alcohol, at various times, and determined a rise of temperature of 0.01 to 0·03 C.

Daub *(Cbl.,* 1873, 466) criticizes the above experiments, by showing that a thermometer, held continuously in the axilla for an hour or more, often steadily rises 0·03 or more when no alcohol is taken. (That is, the axilla, kept continuously closed, approximates more and more to the interior cavities of the body.) Daub correctly remarks that measurements in the axilla are sufficiently accurate for clinical purposes, but not for physiological experiments, where it is a question of a small fraction of a degree.

Daub further showed that, in a person unaccustomed to alcohol, small doses caused a diminished rectal temperature, as compared with that of other days when alcohol was not used. As the person became accustomed to the alcohol, the result failed to be observed. In two children, one with chronic osteitis and the other with caries of the tibia, no heat-lowering effect took place.

Magnan *(Archives de Phygiologie,* 1873, Nos. 2 and 3) gives the results of his experiments upon alcohol and absinth, as follows :—

The immediate effect of alcohol, in a sufficient dose, is, in every animal, drunkenness.

The prolonged use of alcohol provokes, in the dog, beside the drunkenness which follows the administration of each successive dose of the poison, phenomena progressively more marked, which exhibit us the gradual evolution of alcoholism ; from the fifth day of the intoxication, irritability and sensitiveness are observed ; ten days after, illusions and hallucinations in the night ; at the end of a month, delirium night and day.

The prolonged use of alcohol gives rise, in the second month, to trembling, which shows itself first in the hind feet, then attacks the fore feet, and extends progressively to all parts of the body. In no case is an epileptic attack provoked. Finally, the digestive troubles and various complications recall the conditions causing death in men suffering from the chronic effects of alcohol. The anatomical lesions of alcoholism in the dog show in different degrees : 1st, steatosis (liver, kidneys, heart) ; 2d, tendency to chronic irritations (meninges, spinal cord, pericardium).

Essence of absinth, in small dose, determines dizziness and muscular jerking in the anterior parts of the body; in the large dose, it causes epileptic attacks and delirium.

To the first stage of the attack of absinthism (tonic convulsions) correspond dilatation of the pupils, injection of the papilla and fundus oculi and congestion of the encephalon; phenomena which do not agree with the generally accepted theories as to the mechanism of epilepsy.

Animals deprived of their cerebral lobes present, under the influence of essence of absinth, epileptic attacks and jerkings similar to the convulsive phenomena in those animals which have undergone no mutilations.

After the section of the cord below the medulla oblongata, the intravenous injection of the essence of absinth provokes, first, a bulbar attack (tonic and clonic convulsions of the head with foaming at the mouth), and then a spinal attack (tonic and clonic convulsions of the trunk with expulsion of urine and fecal matter).

The isolated action of each segment of the spinal axis, in the regions which it supplies with nerves, accounts for the necessary influence of the whole of the organ in the production of the complete attack of epilepsy; and, on the other hand, taking into the account the sudden and immediate loss of consciousness, one must necessarily admit the direct intervention of the whole cerebro-spinal axis in the production of the epileptic attack.

QUINIA.

Binz *(Archiv. für experimentelle Pathologie und Pharmakologie.* Bd. I. p. 18) gives, in more or less detail, the results of experiments made by some of his students and by himself in continuation of the researches so well-known in connection with his name. These relate chiefly to the premortal (that occurring between the emission from the artery and complete coagulation) and postmortal formation of acid in the blood, which gradually tends to neutralize its normal alkaline reaction. Of course the less acid formed by decomposition, the more will be required to bring it to a neutral condition, when the degree of alkalinity is to be measured by the gradual addition of dilute acid of known strength. It has been found that, when quinia is added to the blood, this decomposition takes place much less rapidly, and that the quininized blood retained, after digestion in open vessels, its alkaline reaction, while that without addition, undergoing the usual changes, required much less acid for its neutralization than if its capacity had been measured when fresh.

Sulphate of bebirin and picrate of soda acted almost as powerfully as quinia, while cinchonia seemed to have but little power.

Further experiments showed the retardation caused by quinia in the formation of isatin from indigo in the presence of blood and turpentine. Chloride of sodium, chloride of calcium, and sulphate of atropia, had no influence upon this reaction; strychnia, a little; hydrochlorate of morphia showed itself about equally active with quinia, while quinia was even surpassed by slightly basic hydrochlorate of cinchonia. Binz thinks this last result somewhat remarkable in connection with the facts determined by Johannson *(Inaug. Diss.*, Dorpat, 1870) that cinchonia is not inferior to quinia in its power of reducing the bodily temperature, and surpasses it in reducing the amount of urea excreted. The action of quinia, in these last experiments, is exerted upon the oxygen bearing properties of the hemoglobin of the blood; since, when the experiment is repeated without blood, and the only oxidizing agent is the oxygen of the air or of the turpentine, the reaction seems to be rather favored than otherwise by the presence of the quinia. If it is true, as seems probable both from these experiments and from those of Manassein upon the change of size in the red blood-corpuscles under the influence of fever, of cold, of quinia, alcohol and prussic acid, that quinia diminished the power of these corpuscles to give off oxygen, then we have another way in which this alkaloid may be supposed to check the activity of the inflammatory process.

Binz has convinced himself that, in the well-known experiment of Cohnheim, the explanations often given thereof, viz., change in pressure and friction, are inadequate, and that a supply of oxygen to the white corpuscles sticking to the walls of the vessels, from the red corpuscles floating by them, is an essential part of the process.

No emigration takes place when no red corpuscles are present. Under these circumstances, the negative results of Balogh were obtained.

Consequently, we have in quinia an agent which opposes suppuration, both by directly diminishing the activity of the white corpuscles, as can be seen under the microscope upon a warmed object glass, and by cutting off their supply of oxygen.

M. Bochefontaine *(Archives de Physiologie,* July, 1873, p. 389) has repeated some of the experiments of Binz, upon the effect of quinia, in killing the minute organisms accompanying putrefaction. Although evidently wishing to oppose the conclusions of Binz, his results are by no means diametrically opposed thereto. He says: "The neutral hydrochlorate of quinia, in a solution of one per cent., acts energetically on the vibrionians of putrid blood, but less energetically than Binz thinks, who attributes to a solution of this salt, of $\frac{1}{800}$, the property of instantaneously killing all the vibrionians. We see, on the contrary, that our more concentrated solution does not act, immediately at least, on the bacterias which usually resist energetic agents. The resistance is not long in this case; yet, in three days, one finds again some active granulations in the mixture of $\frac{1}{100}$."

If M. Bochefontaine reads more carefully either Binz's work or the notice of it, from which he took his information *(Archives de Physiologie,* 1868, p. 747), he will see that Binz does not make the statement attributed to him, but says the solution mentioned kills, at once, the *larger* infusoria present in putrefying solution *(Paramecium and Colpoda)*, agreeing indeed with a later statement of Bochefontaine, viz., that the monads, paramecia and colpodæ, die before the vibrios.

He finds, without however using the very dilute solutions of Binz, that the vibrios are after a time killed, and, in describing the organisms still found in movement after the action of quinia, expressly states that they were *granulations* or *very short "bâtonnets,"* and that their movements are chiefly of gyration and not translation. "The long and short vibrios of putrid blood, endowed with extended movements more or less rapid, have completely disappeared."

In one experiment, however, where a putrid solution contained $\frac{1}{800}$ of neutral hydrochlorate of quinia, he says that some of the vibrios have movements of displacement sufficiently lively and extensive. M. Bochefontaine attributes to M. Binz a much firmer belief in the origin of intermittent fever from palmellæ in the blood (according to Dr. Salisbury), than the compiler is able to discover in his writings.

IRON.

The Medical Times and Gazette, June 7, 1873, gives quite a full abstract of an article by Boussingault. in the *Annales de Chimie et de Physique* of Dec. 1872, containing a large number of determinations of the amount of iron in the blood and flesh of various animals, and in many articles of food. No new conclusions are drawn, but the article is a valuable one for reference.

(To be concluded.)

RUPTURE OF THE JEJUNUM, FROM A FALL, IN A GIRL ELEVEN YEARS OF AGE. By E. HOLLAND, M.D. Lond.—H. P., described as a delicate, lively, and "fly-away" child, fell, at 4 P.M., and struck the umbilical region forcibly against the edge of the stairs. She uttered a sharp cry, got up, walked upstairs alone, vomited the contents of the stomach untinged with blood, complained that she could not draw her breath, and lay down and slept for half-an-hour. On awaking, she got up, walked about, talked freely, and, though seeming faint, made no complaint of pain. At 9 P.M., she went to bed, without supper, and slept soundly till 4 A.M., when she awoke and asked for water. Afterwards, she slept till 6 A.M., when she awoke and again asked for water. At 8 A.M. she walked in her nightdress to an adjoining room, and, without complaint of pain, asked for water and ice. At 12, she walked alone down stairs and lay down on some chairs, and, complaining a little of pain, had some hot flannels applied, but requested them to be removed on account of the "weight." At 4 P.M., for the first time, she asked for something to eat, and, after taking a few mouthfuls of an egg pudding, she vomited, fell back pale, and died without movement.

At the necropsy, thirty-six hours after death, the abdomen was found to be distended with flatus and fluid, and the umbilical region discolored by bruising. The peritoneal cavity was filled with a sero-flaky fluid, deeply tinged with bile. The peritoneum generally was minutely injected, and more or less universally covered with soft lymph. The jejunum was ruptured for nearly half of its circumference, twelve inches from the pylorus, and presented a bruised appearance on each side of the rupture. On cutting open the gut, it was found healthy, and its mucous membrane upraised by extravasated blood in the neighborhood of the rupture. There were no adhesions externally around the rupture, no thickening of the edges, and the latter dovetailed when laid side by side.

Comments.—The interesting features of this case are—first, the slight cause, which can only have its results explained in the delicacy of the fibre resulting from youth, and a state of health below par; secondly, the apparent absence of any severe suffering or shock, so that the friends did not consider her ill enough to require medical attendance until the fatal syncope set in, twenty-four hours after the injury; thirdly, the sudden termination, with vomiting, after taking food.—*British Medical Journal.*

Bibliographical Notices.

On Marienbad Spa and The Diseases Curable by its Waters and Baths. By Apollinaris Victor Jagielski, M.D., Berlin, late Physician to the Prussian Army, author of a Treatise on Koumiss and its use in Medicine, &c. &c. London: Trübner & Co., 57 & 59 Ludgate Hill. 1873. Pp. 185.

If Marienbad possesses a tithe, only, of the beauties and attractions attributed to it by the enthusiastic author of this interesting and carefully prepared volume, it must be a welcome and delightful resort for the invalid, and for the pleasure-seeking tourist. As a rare and rich wine has an added zest, and a fuller bouquet, when quaffed from a delicate and ornamented glass, so must the health-giving waters of Marienbad Spa acquire more potency and be more acceptable when imbibed in the midst of such delicious surroundings. As Sparkling Burgundy, or Veuve Clicquot Champagne, from an earthen cup, so would be the waters of Marienbad from an equally uninviting chalice! Does any doubt of this enter the minds of our readers? A little of the author's description is sure to dispel it. Listen!

"Nestling in a lovely balsamic ravine, 1912 feet above the level of the North Sea or German Ocean, overtopped by mountains capped with beautiful pine-forests, lies Marienbad, in the district of Eger, in the kingdom of Bohemia, which belongs to Austria, twenty-four German miles from Prague (1 mile German = 4½ miles English), five German miles from Eger, Frazensbad, and Karlsbad, and at a distance of ten German miles from Pilsen, Hof, and Plauen.

"Mountains covered with dark evergreen forests surround Marienbad on all sides but the south. Magnificent parks, delightful pleasure walks and drives, are interspersed among the gentle slopes and hills. It is the soft mellow character of the scenery, rather than its grandeur, which refreshes and cheers the impressionable and feeling heart. There is a beautiful contrast between the stern dark summits and the lively green plain, through which, from the very foot of the ravine, small rivulets gurgle along, like the Steinhaubach, Schneidbach, and Hamelicabach, all paying tribute to the waters of the Auschowitzerbach. The well-tended flower-beds, rich in color and fragrance, the neat snow-white cottages, harmoniously combine to form a landscape so overpowering with charms, that whoever is enticed within its bewitching circle is thrown into a blissful ecstasy, which banishes for the time all his bodily and mental ailments and troubles;—the first step to a lasting recovery. Whoever sees it for the first time, will exclaim, as others have done before, 'Oh, what a delightful situation! how charming! It is more lovely than any other spa I have ever seen,' &c."

The book is divided into short chapters, and appropriately opens—as we have seen—with an account of the situation and peculiarities of the country where the spa is found. The *climate*—said to be "that of Central Germany"—is, from the description, all that could be desired. The high elevation of the land removes relaxing qualities from the air in summer, and ozone is abundant. Pine forests offer their "balsamic" additions. "The health of the inhabitants is excellent throughout.

Epidemics never approach, and cases of severe or dangerous illness usually terminate favorably." Physicians cannot expect to thrive in such a locality. It is therefore supposable, that, except for giving advice as to taking the waters, their presence is unknown or barely tolerated, for, "no inhabitant has ever yet been attacked by cholera, and altogether the climate appears singularly suited for curing local complaints, poverty of blood, and nervous diseases; in all which the so-called air-cure produces the most surprising effects, so that mere residence and open-air exercise in Marienbad and its environs is often a sufficient remedy." (p. 3.) In view of these assertions, so constantly predicated of many watering-places, and, doubtless, in the majority of cases, with much truth, we question whether, in justice to ourselves, and in view of the necessity of earning our daily bread, we ought, as we nearly always do, unconditionally to recommend them!

The account of the various pleasant "Excursions" in the Environs of Marienbad, is certainly very tempting; and no less so, it may be, is the naïve assurance to the visitor—"Everywhere coffee!" Here, we suppose, is where the physician's authority may come in, and, although coffee may be everywhere, it may not be for everybody. The volume is a veritable guide-book in the matter of these excursions, and proceeds from the nearer to the farther. Under the head of Distant Excursions, a detailed account is given of "Koenigswart and its Castle," really very interesting. Some strange and valuable relics are enumerated: "Mary Stuart's hair; the comb of Marie Therese; and what is of present interest—in view of the invasion of Spain by their whilome wearer—Don Carlos's baby-clothes" (if, as we suppose, this is the active Don Carlos of to-day), out of which he seems very decidedly to have escaped!

Next comes a chapter on "Hygiene, Diet, and Regimen," headed by the motto "Health is seldom valued until it begins to fail, and then only by reason of absolute necessity"—words worth pondering well, and suggestive of many lessons. We have carefully examined this chapter, and can only say that it is excellent throughout, and may be read to great advantage by all who value their health and comfort, whether they go to Marienbad, or any other spa, or not. Certain hints are so *apropos* that we are constrained to specify them by a few extracts. "Another grave mistake is to suppose that *concentrated* food, or a particular kind of food *highly concentrated*, is turned to better account by a debilitated stomach than moderately nutritious food." * * While recommending water as the "best *beverage* for the maintenance of health," the author very wisely animadverts upon its abuse—and his advice may be advantageously followed everywhere in our own land—in countless cases, often with the result of annihilating dyspeptic troubles, as we can testify from personal observation. "The indiscriminate use of water, as sometimes practised by persons at hydropathic establishments, is to be deprecated * *" "A general rule in respect to water-drinking may be laid down. Do not drink water with or just before your dinner, nor for an hour after, lest the digestive process be retarded." (p. 36.) An excellent "rule," and one we have long been in the habit of "laying down," especially for the dyspeptic; and more commonly extending the "one hour" to two. It would be far better for the community, if the everlasting pitcher of iced-water were removed from many tables where it tempts only to betray. Hotels, boarding-houses, private houses, offices, steamboats, railway cars, and every other place possible for its dispensation, offer the delicious but too often injurious draught. But, here as in regard to watering places in general, we must not say too much, lest our "occupation" suffer, more or less!

As we go on with this same admirable chapter, we have a full and highly interesting account of the famous "*mud baths*" of which so much has often been said. Other forms of bathing are also described.

The Bottling and Exportation of the Waters next engages the author's attention, and very minute details thereof are furnished. The two principal springs whence water is exported, are the Kreuzbrunnen and the Ferdinandsbrunnen. Careful chemical analyses are given; and a most entertaining description of the earlier use of the waters by Dr. Nehr, who wrote the first practical work on Marienbad's natural "springs," forms a part of this chapter. The volume appeared in 1813, and its author died in 1820.

After an elaborate *exposé* of the "Physiological Effects of the Mineral Waters," the author enumerates certain *contra-indications* for the use of the waters. This is an honest and judicious provision, especially in view of the very lengthy list of ailments, afterwards enumerated, in which "good results" are claimed for the waters of the Marienbad Spa. It would lengthen this article beyond admissible or endurable limits, to mention, even, all the fleshly ills pronounced by Dr. Jagielski to be more or less amenable to these wondrous waters. We do not venture to sit in judgment, but if there must be a little of the *cum grano salis* with which to take these statements, every one must admit the thoroughness with which the author has executed his task—doubtless to him a pleasing one—and we may truly say likely to furnish a very useful guide to all who visit the localities he so pleasantly and learnedly discourses upon. Some of our *confrères* will, perhaps, with us, read with a degree of inward questioning, that, by the use of the Marienbad waters, "a very large fatty liver" may be reduced "to its normal volume and state." (p. 113.) The writer refers, he says, to the "fatty infiltration" of Frerichs. Niemeyer, however, is quoted, as testifying to the diminution of fat under the use of the Marienbad and Karlsbad waters; and this is cited, by our author, under the head of "Fatty Heart." He goes on to say, in this connection—"The fact is, that the difficulty of breathing disappears when the weight of such persons has decreased, the heart-sounds become clearer, the pulse fuller and more frequent, and the general condition of the patient more satisfactory." (p. 126.) Very gratifying, certainly; but, of course, temporary amendment and cure are two distinct things.

We must commend these points, and all the extended medical discussions—or presentations, rather—to the careful consideration of our medical brethren; and we do not doubt but that the invalid and the traveller will both derive advantage and pleasure from the perusal of the work. They can entrust the graver topics to their professional advisers, and appropriate the rest to themselves. The book is admirably printed; as yet, we have remarked but one typographical error. Its size and compactness make it a fit pocket-companion, and for frontispiece it has a well-executed plan of Marienbad—Situationsplan von Marienbad; which see, and, with us, "accept the situation."

W. W. M.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, SEPTEMBER 18, 1873.

THE great success attending the introduction of Hospital Sunday in London, this summer, has placed this charity upon such a solid footing, that it is likely soon to be adopted by those cities of Great Britain that have hitherto held aloof from the movement, and to become, ere long, a well-established English institution. It was first started in Birmingham, in 1859, for the purpose of relieving the general hospital of that city from debt, and about £5,000 were collected, and the city has averaged since about £4,000 per annum. Manchester followed her example in 1870, collecting about the same sum. Liverpool came next, and the movement then extended rapidly to a number of other smaller towns. The medical charities of each town, sometimes to the number of twelve or more, share in the distribution of the profits. The movement appears chiefly to be in the hands of the clergy, and almost every religion and creed are represented. Every means is taken to render the collection a large one; circulars are distributed freely for some time before the day on which the collection is to be made, both among the members of the various churches and in all places of business. The sermons are carefully prepared beforehand, and each minister does his utmost to make the contribution of his church compare favorably with those of others.

It was not until this year that the movement extended to London, and the preparations made to insure its success were attended with the most gratifying results. The large sum of £27,403 was realized. All classes participated in the undertaking; the Prince of Wales attended service at St. Paul's in honor of the occasion. The difficulties in the way of the distribution of this money, in such an immense city as London, were very great. Sixty-four hospitals were to be provided for, to say nothing of many dispensaries and other charities.

A number of these larger hospitals, which are well endowed, received a considerable sum, while that awarded to many of the smaller institutions was quite paltry, and, although the committee of distribution had given a great deal of anxious care to the subject, not a little dissatisfaction was manifested. In other cities, however, we hear of no such complaints. In endeavoring to introduce such a desirable form of charity as this, the following points are stated by the *British Medical Journal* as being necessary for success: "1. To obtain the concurrent action of the clergy and ministers of all denominations, who, as they have done in other towns, must, no doubt, make great sacrifices, and must put aside all their jealousies and differences of religion for this object; 2. To obtain the aid of the press; 3. To form a simultaneously acting, simple and effective organization, with the one idea of determination to succeed." With such encouragement for success, we commend Hospital Sunday to the physicians and clergy of Boston. The well-known liberality of our citizens and the size of the city both favor such a movement. Our medical charities would thus be brought into a more prominent light before the community, and an opportunity be offered to the large class of people who avail themselves of them, to contribute, in some measure, to their support.

A COMMUNICATION in another column gives the liquor law from a prohibitionist's point of view. We cannot see that he advances anything new or likely to convince those who believe that the vice of drunkenness in our state may be diminished by other means than the arbitrary ones to which we are at present obliged to submit. He cites authorities to show that the abuse of alcoholic stimulants is an evil which it is highly desirable to remedy, with which, of course, we agree. We look in vain, however, for any suggestions as to how this is to be accomplished by legislation. Any measures, legislative or otherwise, which would make the keeping of that abominable American institution, the "bar room," an unprofitable business, we should hail with delight. But absolutely to prohibit the sale or even the manufacture of any form of drink containing over a certain percentage of alcohol, is as arbitrary and oppressive as it is ineffectual. We might point, among other things, to the records of the criminal court or to the druggists' opium account, did we desire to produce testimony to this effect. We are inclined to the belief that the right of society would more surely be maintained and its status improved in this respect by persuasion and education, rather than by such sweeping and compulsary legislation as is urged by our "dispassionate" country practitioner.

THE following notice has been sent to the physicians of Boston, and others interested:—

The ambulance of the Massachusetts General Hospital, accompanied by a Medical Officer, will be despatched to any point north of Dover and Berkeley streets, for the conveyance of cases of *accident*, or *urgent sudden sickness*, *not contagious*, to this Hospital, or elsewhere, upon notice from a Physician, the Police, or other responsible source, subject to the approval of the undersigned.

In cases requiring gratuitous treatment, no charge will be made.

By order of the Board of Trustees.

NORTON FOLSOM, M.D.,
Resident Physician, Mass. Gen. Hospital, Blossom St.
Boston, Sept. 1st, 1873.

We have had opportunity to inspect the vehicle provided in such liberal spirit by the Trustees of the Hospital. It is a handsome four-wheeled wagon, made by Curley, of New York, adapted from the model of the ambulances in use in that city, drawn by one horse, and with its purpose conspicuously emblazoned on its sides, to ensure consideration from other vehicles in crowded thoroughfares. It is fitted with an upholstered litter on friction rollers, and an inside seat for an attendant. Space for surgical appliances is provided beneath the driver's seat.

There seems to be no good reason why Boston should not possess an organized ambulance system like that of New York and other cities. It is to be hoped that our City Government may follow this excellent example.

THE PROPAGATION OF TYPHOID FEVER BY MILK.—It is well known in this vicinity that typhoid fever has recently prevailed, to an alarming extent, at one of the most popular summer resorts. The cause assigned has been defective drainage, and an unpardonable neglect on the part of the proprietors of the public houses to provide proper hygienic surroundings for their guests. The latest London Medical Journals report a frightful outbreak of typhoid fever in their city, which cannot be traced to direct importation nor to defective drainage; for the hygienic conditions of the households attacked were the best that could be secured. In fact, "the cause of the epidemic seemed, at first, very mysterious, but," says the *London Medical Record*, "a clue has been suggested which leads pretty surely through the maze. The consideration of the character of two outbreaks in his nursery, led Dr. Murchison to suspect his milk-supply as being the vehicle of the poison. Of forty-three families reported as suffering from typhoid fever, it was found that, although living in different parts of the town, forty were supplied from the same dairy, and a committee of inquirers have proceeded to the farms, whence the supply of milk is drawn, to investigate the possibilities of foreign sources of infection to the milk of these farms.

The Medical Times and Gazette, of Aug. 15, 1873, contains an article on the "Propagation of Zymotic Diseases by Milk." It quotes the opinion of various writers who have held that certain outbreaks of typhoid fever could be clearly traced to contaminated milk, and states that there is evidence that milk may be contaminated with the contagion of zymotic disease, and yet be apparently of fair quality and present the chemical characters of a normal unadulterated fluid. It is believed that not only typhoid fever but other zymotic diseases can be propagated through milk.

As to the ways in which contagion may be introduced into milk, there are two—through water and through air. "The most obvious channel of mischief is undoubtedly water, used either for purposes of adulteration or, it may be, accidentally introduced in processes of cleaning, etc. Knowing as we do how infinitesimally small is the bulk of solid contagium capable of conveying vaccinia or variola, it is impossible to deny that the most trifling accidental addition of infected water may be sufficient to contaminate a considerable quantity of milk. A speck of contagious matter from a typhoid patient left in a can, by the water with which it was washed, may do all the mischief. But it would seem that even admixture of water is not necessary. In the case of the second Leeds outbreak, reported on by Dr. Robinson, the inmates of the dairy farm, whence the milk came, were the victims of typhoid fever; the water supply of the farm was remarkably pure, being obtained from a source at a higher level than the house; but the sick were in a room communicating with the diary, those who nursed them attended to the milk, the sanitary arrangements were as bad as possible, and the house, cow-house and dairy seem to have been in an atmosphere of emanations from the sick. In the case of the Penrith outbreak, three children were down with typhoid fever; their mother nursed them; she milked the cows which were kept in a byre adjoining the house; the milk was brought into the room where the children were lying sick, and there it remained until distributed to the customers, many of whom took the disease.

"Still we must acknowledge that these facts have not the precision which would warrant us in asserting that pure milk, exposed to an atmosphere of contagium, is certain to become a vehicle for its propagation. It probably is so, but absolute proof is yet wanting. The evidence in favor of the contamination of milk by water containing febrile poison is stronger, and it is supported by the known facts of the propagation of enteric fever by the water-supply. That milk will convey zymotic disease, we hold to be absolutely proved; and it is a question whether it is not one of the most certain and dangerous modes by which it may be disseminated. Itself an organic fermentable fluid, it may be that it is suited for the conveyance and spread of zymotic poison in a higher degree than either water or air."

Report of the Committee on Diseases of the Nervous System.* Dr. Bartlett, of St. Peter, chairman of the committee on nervous diseases, after sending to the physicians of the State a circular containing the questions reported herewith, presents, as follows, his summing up of their replies:—

St. Peter, Minn., Feb. 24, 1872.

Dear Doctor:—In order to make a thorough and practical report on nervous diseases of this State, your assistance is most respectfully and earnestly solicited.

1st. What have been the prevailing forms of nervous disease in your practice?

2nd. Have these diseases differed in any manner from the same forms as experienced in other States?

3rd. Have you seen any cases of chorea? What treatment has been most successful?

4th. Has neuralgia about the face and head been a frequent complaint? and more especially among women? What treatment has been most successful?

5th. Have you seen many cases of insanity? What, in your opinion, has been the most prominent cause?

Please answer the above as fully as you are able, stating also in what other State or States you have previously practised medicine, adding any suggestions that may occur to you as of interest to the committee.

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* From the Transactions of the Minnesota State Medical Society, 1873.

1st. Neuralgia, in various forms, that may be *distinguished* by external, or surface pain, or pain along the nerve track and its branches, is the most common disease of the nervous system. If we speak of the diseases of the nervous system in its *broadest sense*, we may include almost the whole catalogue of diseases on record, as all diseases affect the nervous centres, more or less, whatever their cause or origin, and manifest themselves by reason of that system; but, for present purposes, we limit our report to such diseases as we suspect exist primarily in the *brain* and *spinal cord*, with their *coverings* and *connections*. Notwithstanding the earnest efforts of modern pathologists to solve the mysteries of these nervous complaints, it must still be confessed that they are yet involved, to a considerable extent, in obscurity, and that the treatment is largely *experimental* rather than *philosophical*. Nevertheless, progress has been made in consequence of these researches, and much suffering is now relieved by direct and simple methods of treatment. The treatment for this form of disease, viz., neuralgia, as given in these replies, is uniform, and the success generally reported as satisfactory.

2d. In answer to our second inquiry, we learn that these diseases do not differ essentially from the same forms met with in other States of a northern climate.

3d. In answer to our third, that Chorea, although occasional, cannot be considered as *frequent* in Minnesota.

4th. In answer to our fourth question, it is stated by all, except one or two, that the most frequent seat of neuralgic pains is about the head and face, and that women suffer more in this respect than men, though the latter are by no means exempt. No cause has been assigned for this, except in one instance, where decayed teeth were suspected. One fact concerning this climate in connection with the frequent form and seat of neuralgic pain, has not been mentioned by any respondent, but it has seemed to me of considerable importance. I allude to the prevailing strong and cold winds, which none can fail to notice as a constant cause of irritation to animal nervous systems.

It may be said, if this be so, then *men* should suffer more generally than *women*, as they are necessarily more exposed to this cause. But it may be stated, in reply, that men are better protected, both by nature and artificial means, from this exposure, and that women are frequently tempted, by short errands, to indulge in exposure in the open air directly from heated rooms, without any covering to the head, and that the face and forehead at the best, when supposed to be dressed for out-door exercise, are not allowed any covering by modern fashion. When it is *possible* for women to grow beards, or encase their heads and faces in *homely* fur-lined hoods, at every out-door exposure during cold weather, then *possibly*, and even *probably*, they will be able to bear *this climate*, or *any climate* of ice-cold winds equally as well as men.

In respect to the fifth and last question of the circular, in regard to "Insanity in this state and its causes," only observations of a few cases have been reported, and not enough to classify causes to any extent. As my own experience here has been confined almost exclusively to cases of this description, I will briefly state, in conclusion, some of the leading facts concerning the subject, in Minnesota, at the present time.

5th. It is thought by many, who have not investigated the subject particularly, that insanity is *unusually* prevalent in our State; but the facts, so far as my observations extend, do not sustain that supposition. To the best of my knowledge, we have not more than five hundred insane persons in the State at the present time, which gives us one and a fraction to every one thousand inhabitants; while one to four or five hundred is the average in the older States, and where statistics have been carefully made. It is true that the number is increasing, but not, probably, out of proportion to the increase of the population. A *new State* should not, *theoretically*, have so many insane as one where chronic cases have been accumulating for several generations; and *practically*, I think, this is generally true; California may form an exception, as the number of insane in that comparatively young State is enormous; but the frequent and bitter disappointments, "the hopes deferred," of the seekers of sudden wealth, in connection with the exciting life led by all, both fortunate and unfortunate, may account, in some measure, for the fearful waste of mental power and integrity witnessed there.

The climate of this State, having an extensive reputation as one favorable for persons afflicted or threatened with lung diseases, tuberculous or otherwise, has attracted hither invalids with these difficulties, in large numbers, and we should naturally expect to find "ill health" arising from tuberculous disease, inherited or developed previous to a residence here, conspicuous among the causes of insanity; but the facts, so far as the histories of patients admitted to the State Hospital for the Insane inform us, do not accord with this expectation. "Ill health" is frequently assigned as a cause, but it has generally followed some acute disease, such as typhoid fever, or physical exhaustion from causes depressing to the vital forces, hard work, poor and insufficient food, uncomfortable homes, domestic troubles, conditions following the puerperal state, pecuniary anxiety, and nostalgia. The latter, obscured by other and prominent symptoms, is not assigned as a *primary* cause so often as close investigation would undoubtedly demonstrate it to be; the social relations holding a controlling influence on the feelings and habits of life, and the rupture of these ties by a large number of the present population of our State, must result in a severe strain on the mental forces, and especially as many of those called to endure these changes and trials have few resources within themselves, and not much of that strength that springs from a thorough cultivation of the intellectual and moral powers of the mind.

Intemperance, though a prolific source of evil of every kind and grade to those who indulge in strong drinks, and to their descendants, does not appear more fully represented by its victims, mentally disturbed, in this State, than elsewhere; and "the excessive use of tobacco" is not more frequently noted as a cause of insanity *here* than in the East, where it does not appear so constantly and so universally consumed by men as in the western States. Solitary vice, either as a cause or consequence of insanity, is, apparently, more general here than in the eastern States. Two reasons may be given for this: the difference in the number of the sexes, the males being in the excess, and the stimulating character of the climate on the passions and temperaments of men.

A comparison of the causes of death, among the insane, between this State and one of the eastern hospitals is interesting in relation to the frequency of phthisis in the two portions of our country. Of the 92 deaths that have occurred among the inmates of the State hospital since its opening, only 8 are reported as caused by phthisis; and one of this number came from Massachusetts in the last stage of the disease, became maniacal, was admitted to the hospital and died soon after. This small number of deaths seems more remarkable, when we consider the large number of invalids seeking homes in this State, on account of their pulmonary difficulties. Leaving out of our calculation the one alluded to, we have only 7 in 92, or 1 to 13; or, rejecting fractions, about 7 per cent.; while in the eastern hospital mentioned, where the record was mostly kept by my own hand and the statistics would naturally follow the same rule as to accuracy, of 359 deaths, 127 are attributed to phthisis, or more than 1 to 3, or, in other words, more than 30 per cent. of all the deaths; and this rule holds true of other institutions of the eastern States and of the Canadas. While these wide differences exist as to this disease, the numbers reported as dying of marasmas, a gradual decay of both body and mind, are almost the same in both places; and, in regard to other prominent causes of death, there is no particular distinction.

This, Mr. President and gentlemen, we beg leave, respectfully, to submit as our report.

C. K. Bartlett,
Chairman of Committee on Diseases of the Nervous System.

The Abuse of Chloral.—*The Lancet* of May 3d, 1873, states that from various quarters it has received trustworthy reports which leave no doubt that this very valuable medicine is being grossly abused by the public. The public should be plainly told that chloral is no more to be administered by unskilled hands than is opium or strychnia. There are several ways in which its improper use may cause serious mischief. In the first place, a single dose may cause death by failure of the circulation, and there seems to be very great differences between persons as to the dose which can be taken without danger of this fatal catastrophe. The other possible results of chloral are chronic. Where it is taken without proper reasons, repeatedly for a considerable time, it may produce either or both of the following effects: it may seriously affect the intelligence and memory, or it may produce partial paralysis of the limbs. The latter is a fact which, though the *Lancet* has not seen it anywhere recorded, is, nevertheless, becoming known to observant practitioners, and will henceforward have to be reckoned as a possible consequence of the rash use of chloral. Besides all these things, chloral is fully as guilty as opium or any other recognized narcotic of the tendency to render those who take it the slaves of habit; and it is by no means certain that the moral enfeeblement which it thus induces is not even greater than that of opium-eating, unless the latter be carried to great excess.

Modified Lithotomy Staff.—Dr. Lewis D. Mason has invented a novel lithotomy staff, consisting in the combination of a catheter and a grooved staff in the same instrument, a description of which in words would not be of much use without the aid of wood cuts. The advantages claimed for this double instrument are the following:—"Having the solidity of a sound, combined with all the advantages which a catheter possesses, an opportunity is afforded to examine or sound the bladder easily and rapidly under various conditions, viz.:—full, partially filled, or empty, without removing the sound; fluid being injected into or drawn off through the canula to fulfil either of these conditions.

"Another advantage is the triple capacity in which the instrument may be made to act, as sound, catheter and staff, *without necessitating its removal from the bladder*, thus saving multiplicity of instruments, abridging the period allotted the operation, avoiding additional irritation of the urethra, and preventing loss of fluid from the bladder, which not uncommonly follows withdrawal of the catheter, or occurs subsequently during the introduction of the staff.—*New York Medical Journal*, May, 1873.

Correspondence.

"THE PROHIBITORY LAW IN THE LIGHT OF SANITARY SCIENCE."

Messrs. Editors,—Permit me to say as a long time friend and reader of the Journal, that I have occasionally noticed, of late, comments in its columns bearing on the question of temperance reform, breathing a spirit unfavorable, I fear, to the cause of humanity. Impressed with a sense of high respect for its eminent editors and contributors, I have not felt it my duty to speak until I read the editorial of Aug. 28th, entitled "The Prohibitory Law in the Light of Sanitary Science," when not only a sense of duty, but also of self-respect and professional reputation forbid my longer remaining silent.

In the article referred to, after expressing a "strong feeling of indignation" at the recent liquor seizures by the State Constabulary, you say, "It is a well-known fact that the best medical authority is in favor of the introduction of cheap, light wines and the use of beer as the best means we have at our command to diminish drunkenness. Testimony has not been wanting in quantity or quality, and, in the face of it all, we are actually subjected to these daily outrages by a miserable set of pie and bean fed politicians, who do not appear to be acquainted with even the most common rules of health. The wretched physique of the poorer class of Americans in the country, is evidence enough of this deplorable state of ignorance." Further on, you blame "country practitioners for this state of affairs," and say, "every good physician ought to feel, in part at least, responsible for, and ashamed of the liquor law." Now supposing it were a well-known fact that the best medical authority is in favor of the general use of wine and beer as the best available means of diminishing drunkenness, should the conscientious and intelligent masses of a free and civilized community, constituting an independent state, be abused for not discontinuing at once, on the mere *ipse dixit* of medical authority, a course of reformatory measures which appear to them rational and effectual, especially when the alternative proposed by medical authority appears to most minds absurd, and contrary to general experience? But it is not a well-known fact, I think, that the best medical authority is in favor of the use of wine and beer as above stated. Nor, indeed, is it a fact at all, so far as I know, unless reference be had simply to the position taken by Dr. Bowditch in his late inquiry regarding "Intemperance in New England," for I think now of no other eminent medical man or men who has recently published similar views. And of Dr. Bowditch's fifteen propositions for treating intemperance in New England, I think prohibitionists object to only the fifth, sixth, and ninth, while they heartily endorse those in relation to the vending and drinking of alcoholic spirits, as thoroughly prohibitory. His fifth proposition reads as follows: "In Europe, and in other grape-growing areas of the earth, mild wines are used from babyhood to old age, and they do not seem to produce a nation of drunkards." Sixth. "Similar remarks may be made on lager beer and its effects." Much might be said, if space permitted, in disproof of these propositions, but perhaps a few statements recently published by French physicians will be most in point. "A very interesting work, Le Statistique de l'Alcoholisme, by Dr. Decaisne," says *The Boston Journal of Chemistry* for August, "has just appeared in Paris." "The author considers that the abuse of alcoholic drinks has become, in France, a social question of the highest importance and a source of public danger." According to statistics given, its use, per head of the population, has more than doubled within forty years. "Not only has the consumption of spirits increased through France, *but alcoholic drinks have displaced, to a considerable extent, the use of wines and cider in the districts where vines and apples most abound*, and every where the increase of insanity, suicide, vice and crime has been in proportion to that of intoxicating drinks," &c. Also, in point, a case recently reported by M. Vernay in *The Lyon Medicale*, and re-published in *The Medical News and Library* of June, 1873, where an infant rather mysteriously suffered from convulsions, until it was found that "the nurse took six or eight glasses of French wine daily, and some more at night." When the wine was discontinued, the convulsions ceased, &c.

And, further, as the JOURNAL seems to reverence medical authority, let us briefly present the authority of English and New York physicians on certain points, in excuse for the asserted stupidity of "pie and bean fed" prohibitionists, and "our country practitioners," and, also for "the wretched physique of the poorer classes of Americans in the country." The New York physicians, Delafield, Parker, Clark, Peaslee, Agnew, &c., recently signed a declaration stating, among other things, that, in view of the alarming prevalence and ill effects of intemperance, "We should welcome any judicious and effective legislation, state and national, which should seek to confine the traffic in alcohol to the legitimate purposes of medical and other science, art, and mechanism."

Dr. Carpenter gives the names of many of the most noted English physicians, and says over two thousand have signed a certificate containing, among others, the following declaration. 2. "That the most perfect health is compatible with total abstinence from all intoxicating beverages, whether in the form of ardent spirits, or as wine, beer, porter, cider, &c. &c."

Now, had the JOURNAL dispassionately reflected on the situation, on the rights of society to maintain and improve its status, by all legal and constitutional means, closing the avenues to disease, vice and crime, so far as may be without detriment to the legitimate interests and rights of individuals, would it not have spoken more respectfully of the aims and efforts of a majority of the citizens of an ancient and most respectable Commonwealth, sincerely seeking to diminish or abolish the greatest evil and tyranny that individuals of a "free and civilized community" can be subjected to, "a species of tyranny" more galling and destructive to the welfare of humanity than all the enactments of man towards man, since the world began.—THE TYRANNY OF ALCOHOL! COUNTRY PRACTITIONER.

DOWN EAST, Sept. 7th, 1873.

MESSRS. EDITORS,—Among your notes and queries in the JOURNAL of Aug. 28th, is one addressed to us country fellows concerning splints, "when the classical splints are not at hand." For my own part, not being a man of much ingenuity, I can't possibly invent a splint. There isn't room enough in my buggy to carry them with me, and I have often been obliged to let patients get well without them. I remember that my old master used to tell us, that Mr. Cooper (Sir Astley, he meant) said, that "if he should have a fracture of the cervix femoris, he would have his leg put on a pillow, in the most comfortable position possible, and, after the lapse of a few weeks, would get up, and go about, as well as he could with a crutch." Now, I have used Mr. Cooper's treatment, as laid down in his writings, and I have used the treatment spoken of by him; and the patients treated in the latter style always got on the best.

The success in these cases was so good, that I have tried it with other fractures of the lower extremity, and with equal success. I remember that Dr. George Hayward used to show us how to tire out refractory muscles by a weight tied to the foot, and this we country doctors, without ingenuity, do to help our patients along.

Some of us, who read the JOURNAL, though we cannot point to the place, where it is spoken of, remember, that some one advised clean straw for splints, and we can almost always find that. Last week, I sent up to Boston for a few bottles of wine, to J. D. & M. Williams's, and when it came every bottle was put up in straw splints. Just the thing for a broken humerus. I thought then, that their bottle packer ought to be in one of the hospitals. The great advantage of straw is its lightness and cleanliness. Then again, a good pillow makes a good splint for a lower extremity, if it is well tied about the part. One great advantage it has is, that you can't tie it so tight as to impede the circulation.

About in this part of the country, people expect to be hurt in having their bones set, and they express great surprise that the slight pull we give them is sufficient, and relieves pain; and they seem just as well satisfied with a pillow, a small bolster, or a few ounces of straw, as they would with a Baker's harness, or a cord of wood fastened to them.

When I began practice, folks used to dread the time "when the bones will begin to knit, because it will hurt then, if it don't before." Somehow, it seems, with pillows and straw and bolsters, as if knitting was an agreeable pastime with bones. It don't hurt at all.

The longer I practise, the less machinery I want, and the less medicine I can get along with. I was somewhat disturbed a little while ago, when a doctor from a neighboring town said to me, "you fellows that have patients, who get along without medicine and splints, and don't believe in dosing, as you say, had better keep your opinions to yourselves, and not spoil our business."

If you think, therefore, "respublica detrimentum caperet" by anything I have written, why don't print it. Yours, RUSTICUS.

MESSRS. EDITORS,—In the JOURNAL of Aug. 28th, a description of improved apparatus for common fractures is asked for. Now it seems to me that usually but little apparatus is required, and that thin, smooth board, tin angular splints, hoop-iron, pasteboard, a pulley, adhesive plaster and plaster of Paris are a tolerably complete equipment. The board will supply straight and coaptation splints; pasteboard or felt can be moulded to any desired shape, and strengthened by hoop-iron, or by gluing together several thicknesses. A pulley, inserted into an upright fastened to the bed, provides for extension, a beam under the legs for counter-extension, and bricks or flatirons make handy weights. Any box is potentially a fracture box, and plaster of Paris is almost everywhere admissible. These so well take the place of "classical splints," that any ingenious apparatus hitherto undescribed will be as valuable an addition to a splint-room as it will be to the resources of a country practitioner. C. A. LOVEJOY, M.D.

Lynn, Aug. 30th, 1873.

Medical Miscellany.

DR. DAVID P. SMITH, of Springfield, has been appointed Professor of the Theory and Practice of Medicine, at Yale Medical School.

WE regret to hear that M. Littré, the celebrated French lexicographer, who has just completed his Dictionary of Medicine, Surgery, and the Allied Sciences, is suffering from a malady which it is feared will shortly prove fatal.

ADHESIVE PLASTER.—According to Otto Facilides, adhesive plaster, which has become brittle by age, and has lost its adhesive qualities, may be rendered adhesive again by coating it with oil of turpentine, by means of a sponge, and leaving it exposed for a day.—*Am. Practitioner.*

SUBCUTANEOUS INJECTIONS.—Dr. Constantin Paul recommends glycerine as a dissolvent for subcutaneous injections. He considers it to be far superior to water, alcohol, etc.; it is neutral, can be kept easily, and is, of all liquids, the one which approaches the nearest to the composition of subcutaneous cellular tissue.—*Lancet*, Aug. 2, 1873.

MEANS OF DIAGNOSTICATING LIPOMATA.—A character peculiar to lipomata resides in the property belonging to all fatty tumors of hardening under the action of cold. When, after the use of ice or the ether spray, in the case of a doubtful tumor, the growth is felt to become harder, the presumption is that the case is one of lipoma.—*Rev. Méd. Phot. des Hôpitaux.*

WE are in receipt of the sixty-first Annual Announcement of the Medical Institution of Yale College. We notice that, in the spring term, the students are classified according to their time of study, and the three classes have appropriate work in the form of recitations and lectures, laid out for them. The vacancy made by the resignation of Prof. Ives, has been filled by the appointment of Dr. D. P. Smith.

BEWARE OF OFFICE THIEVES.—A gang of these gentry have been "operating" quite extensively during the present month, in the offices of many physicians in this city. The man who calls asks for the doctor, waits a few minutes and then makes off with whatever he can lay his hands upon. In the description given, we find that loose, dark clothes and long, black hair figure conspicuously.

IT will be remembered that the veteran English physician, Sir Henry Holland, closed his delightful volume of "Recollections" last year with observing that the foreign journeys which he had been in the habit of taking annually for fifty years were probably at an end, and that "in future" (he was 85 as he wrote) he should restrict himself to a narrower circle. He has changed his mind, however. The gallant doctor has just left London on his ordinary two months' tour, for a place as distant from his home as Nijnii Novgorod, where he trusts to see for himself a fair, of which every one who knows anything of Russia has heard.

DR. JOSEPH BELL of Edinburgh, in a paper on surgical cases in relation to temperature, lays down the following axioms.

1. Suppuration, even very profuse, does not necessarily imply any great rise in temperature, so long as it is not putrid.
2. Fœtor or putrefaction of suppuration always induces a rise in temperature.
3. A high temperature, lasting for more than three or four days after the injury or operation, indicates mischief impending, such as sloughing or abscess.
4. The temperature generally gives warning a day, or even two days, before the pulse.

THE cholera is now worse at Berlin than at Vienna. The overcrowding of the North German city has re-inforced the epidemic most effectively. In the Friedrichstrasse, the 2nd Grenadier Regiment of the Guards, after losing from twenty to thirty men in each company, had to be removed to the interior.

MEDICAL AND SURGICAL HISTORY OF THE WAR OF THE REBELLION. It is stated, that in many parts of the country, persons anxious to consult this valuable government document, are unable to obtain access to it, and that even a copy is not to be found in many of the public libraries. This statement may seem inexplicable when it is remembered that Congress voted 3000 copies of the work, of the 5000 printed, for the use of its members; but an explanation satisfactory to many will be found in the fact, that, in Washington, copies are exposed for sale at prices scarcely more than nominal, and that the trade there is overstocked, and a market for the work has to be sought elsewhere.

How it happened that these copies, which are said to have cost the government $125 apiece, were not distributed among the people, as was intended, but got into the hands of Washington book-dealers, and how they are able to offer them for sale at prices vastly below the original cost, may, perhaps, be explained by honorable members of Congress.—*The Medical News and Library.*

IN the Italian section of the Vienna Exhibition, Dr. Marini exhibits, among an assortment of human feet, hands, legs, arms, and busts of shrivelled proportions and deep brown color, a large, round plateau, evidently of hard and polished material, which has been likened to stale gelatine or potted boar's head. It is a conglomerate of specimens illustrative of an art invented by him—the petrification and mummification of human corpses. It was this very Dr. Marini who petrified Mazzini, and executed his work so well that the admirers of the arch-conspirator proposed to set up the corpse on the capitol and save Italy the expense of a statue. The preparations are weather-proof and will take on high degrees of polish. His mummified specimens, by a process known to him alone, can be restored to their original size and elasticity; while the petrified ones are as hard and possibly as durable as granite. The top slab of the table is composed of muscles, fat, sinews, and glandular substance, all petrified together in a block, the surface of which has been planed and polished until its face resembles marble. Certificates from Nélaton and other distinguished surgeons are attached to the specimen limbs, setting forth that the limbs in question had, for the satisfaction of the certifiers, been restored to their pristine softness and pliancy by Dr. Marini.—*Lancet.*

MORTALITY IN MASSACHUSETTS.—*Deaths in seventeen Cities and Towns for the week ending September* 6, 1873.

Boston, 176—Charlestown, 13—Worcester, 27—Lowell, 27—Milford, 7—Cambridge, 21—Salem, 9—Lawrence, 9—Springfield, 10—Lynn, 16—Gloucester, 13—Fitchburg, 5—Newburyport, 3—Somerville, 9—Fall River, 43—Haverhill, 6—Holyoke, 9. Total, 403.

Prevalent Diseases.—Cholera infantum, 86—consumption, 50—dysentery and diarrhœa 25—scarlet fever, 21—pneumonia, 16—typhoid fever, 15.

Two deaths from smallpox occurred in Holyoke.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, Sept. 13th, 148. Males, 84; females, 64. Accident, 2—abscess, 1—inflammation of the bowels, 1—disease of the bowels, 1—bronchitis, 1—inflammation of the brain, 1—congestion of the brain, 1—disease of the brain, 3—cerebro-spinal meningitis, 1—cholera infantum, 35—cholera morbus, 2—consumption, 20—convulsions, 2—debility, 4—diarrhœa, 2—dropsy, 1—dropsy of the brain, 4—drowned, 1—dysentery, 3—diphtheria, 3—epilepsy, 2—scarlet fever, 11—typhoid fever, 6—disease of the heart, 5—intemperance, 2—disease of the kidneys, 2—disease of the liver, 4—congestion of lungs, 1—inflammation of the lungs, 3—marasmus, 7—paralysis, 3—premature birth, 5—peritonitis, 1—purpura hæmorrhagica, 1—stricture of the colon, 1—suicide, 1—teething, 1—tumor, 1—tabes mesenterica, 1—unknown, 1.

Under 5 years of age, 82—between 5 and 20 years, 9—between 20 and 40 years, 25—between 40 and 60 years, 25—over 60 years, 7. Born in the United States, 113—Ireland, 19—other places, 16.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

Vol. Lxxxix.] Thursday, September 25, 1873. [No. 13.

Original Communications.

A BRIEF SKETCH OF THE METHODS OF REMOVING GROWTHS FROM THE LARYNX WITH THE AID OF THE LARYNGOSCOPE; WITH A CASE, IN WHICH A FIBRO-CELLULAR GROWTH WAS REMOVED FROM THE RIGHT VOCAL CORD.

Read at the Meeting of the Massachusetts Medical Society, June 3d, 1873.

By F. I. Knight, M.D.

We find, scattered here and there in the medical literature of the hundred years previous to 1859, records of between sixty and seventy cases of laryngeal growths, most of which were discovered after death. In only nine of these cases, was an attempt made to remove the growth during life, "and one of these," as Mackenzie says, "is so vague that it must necessarily be excluded."* In four of the remaining cases, viz., those of Regnoli (of Pisa), Middeldorpf and the two of Horace Green, the growth was removed through the mouth.

Since Czermak's discovery of a practicable method of performing laryngoscopy, in 1858, hundreds of cases of laryngeal growths have been observed and treated. It was the good fortune of Czermak himself to have been the first to observe a laryngeal polypus by the aid of the mirror, and Lewin seems to have been the first to have removed a growth from the larynx by the aid of the same.†

It is evident from the number of cases which have been observed since the discovery of the use of the laryngoscope, that growths occur in the larynx not infrequently, and it will naturally be asked why more were not found formerly on post-mortem examination?

Some observers still feel it hard to answer this question, while others say that in most cases the larynx was not opened at all, and in the few cases in which it was opened, small growths might easily have been overlooked; and I have recently had a case, which I shall report elsewhere in full, which seems to show that warty growths shrink up very much after death.

Czermak's discovery created an era in the treatment of laryngeal growths, and opened a field for operative procedure, which, if indeed usually requiring much practice and a great degree of patience, is full of brilliant results.

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* Growths in the Larynx, p. 3.

† On July 20th, 1860. Deutsche Klinik, 1862.

It is my intention, in the limited time allowed me, to briefly bring to the notice of the society a few of the instruments and methods of operating, which I consider to be among the best of those which I saw employed last year when visiting the various laryngoscopic clinics of Europe.

I will simply state beforehand, without stopping to argue the points involved, my opinion that *no operation should be attempted on growths known to be malignant, and that thyrotomy should never be performed until it is decided that all other methods of operating are impossible.*[*]

Fortunately for us, however, a non-malignant growth seldom occurs in the larynx, which cannot be removed through the mouth by the aid of the laryngoscope. In young children, however, it will sometimes be found impossible to remove the growths in this manner; and in these cases I agree with Dr. Oliver, of this city, in thinking it better treatment, instead of performing thyrotomy, to introduce a tracheotomy tube, when the dyspnœa becomes dangerous, and then to wait till the child becomes old enough to submit to an intra-laryngeal operation, or until the growth disappears, which Dr. Oliver is convinced, from experience, may happen, when the growth is a simple, soft, papillary one. Mr. T. Holmes, in a communication in the *British Medical Journal* of May 10th, 1873, also speaks, with reference to such cases, in favor of performing tracheotomy, and waiting till the child is old enough to allow the growth to be removed through the mouth.

Again, if a growth is small and so situated as to produce no inconvenience, and if, after examination at repeated intervals of time, it is found not to be increasing in size, it may, as Mackenzie suggests, be left alone. This would be particularly desirable, if Gibb is correct in his opinion that the "pecking away" system is, in some constitutions, most liable to generate malignant disease from the irritation it sets up.[†]

The question will naturally be asked, how much can be accomplished by inhalations or by solutions applied by means of a brush or sponge, towards the removal of laryngeal growths. From inhalations, little or nothing can be expected in the treatment of primary neoplasms, the striking effects, which have been reported from their use, occurring usually in syphilitic, typhus and other secondary excrescences, which show a strong tendency to, and often do disappear of themselves.[‡]

A few growths have been reported to have disappeared under the use of caustic and escharotic solutions applied by means of the brush or sponge, but I suspect the number of genuine neoplasms, which have so disappeared, to be very few. Those acquainted with the use of instruments for the removal of laryngeal growths, as a rule, only use caustics and escharotics as applications to the seat of a growth, the most of which has been already removed.

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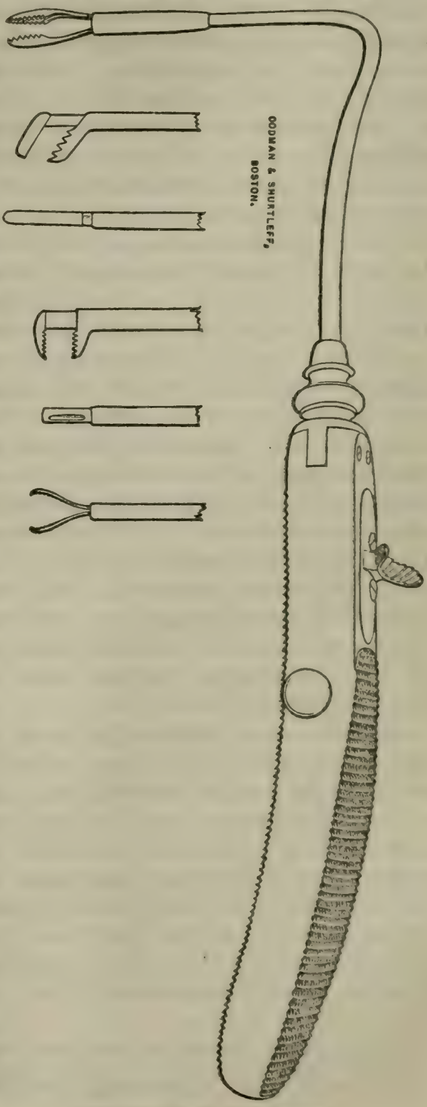
[*] Those who wish to investigate the merits of thyrotomy, for the removal of laryngeal growths, are referred to a very able and exhaustive paper, likely to do much for the cause of conservative surgery, by Morell Mackenzie, in the *British Medical Journal*, April 26th and May 3d, 1873, in which there is a description of the results of this operation, in forty-eight cases collected by himself; 1. In relation to life. 2. In relation to respiration. 3. In relation to voice. 4. In relation to recurrence.

[†] The Laryngoscope in Diseases of the Throat, &c. Gibb, 3d edition. London. 1868.

[‡] See cases of Siegle, Inhalationen, III. Auflage. Stuttgart, 1869, p. 172; and Fieber, Die Inhalation. Wien, 1865, p. 117.

Of instruments employed for the removal of laryngeal growths, it was natural that the forceps should have been one of the first, and it continues to be, in one form or another, the favorite instrument. It is adapted to those cases in which the growth is attached by a small pedicle, or in which, if the attachment is large, the growth is soft enough to be broken away by pieces, or to be removed by pieces, after they have been partially cut off by the knife.



Shrœtter-Tarck tube forceps.

Many varieties of this instrument have, of course, been invented. Those which were formerly made and sold as laryngeal forceps, for removing foreign bodies from the valleculæ at the base of the tongue and from the hyoid fossæ, were much too short to be used to advantage within the interior of the larynx. The general form and curve which I prefer for laryngeal instruments is seen in this sound. Mackenzie, in his modification of the common steel forceps, has transformed the curve into nearly a right angle, thereby trying to avoid unnecessary irritation of the epiglottis. I think, however, that as a rule one operates better with this instrument resting firmly and steadily on the epiglottis, than by trying to avoid it; in which case he is pretty likely to touch it just enough to be very irritating. This instrument of Mackenzie, one of Fauvel, which is armed with teeth for seizing the growth, and with a catch upon the handles to prevent their being opened when once they have closed, and the Cusco forceps are the principal modifications of the *common steel forceps.* One or more of the blades may also be made with a cutting edge.

Excellent *tube-forceps* have been invented by Mackenzie, Bruns, and others, but the instrument of this kind, which I prefer, is the Schrœtter-Türck forceps, which I have had so modified by Messrs. Codman & Shurtleff that the forceps is closed by the tube being pushed over it, as is done in Mackenzie's and Bruns' instruments, instead of by a withdrawal of the forceps within the tube, as was formerly the case. The reasons why I prefer this instrument are, on account of its firmness and strength, and on account of the shape of its handle, which is curved to one side, and entirely removed from the line of vision, and can be firmly grasped in the whole hand.*

Various forms of the *wire-noose* have been proposed, and used by different operators. These may also be used where the growth is attached by a small pedicle, or is soft; in a word, in about the same class of cases as the forceps.

One of the best instruments of this kind is that of Störck, in which the wire is guarded to prevent it from being bent during its introduction. Dr. Jelenffy, of Pesth, advocates the forcing of this instrument into the larynx at random, even on the first visit of the patient, as the polyp may, by the spasmodic action of the larynx, be forced into the noose and so extracted, and as nothing else in the larynx would be likely to be engaged in it. A regular guillotine blade also has been adapted to this and instruments, but those familiar with the use of the tonsil-guillotine will know how hard it is to engage a small growth in it. I should think that the guard over the wire-noose in Störck's instrument would, for the same reason, render its use difficult in small growths.

Of the *cutting instruments,* which are necessary to aid in the removal of growths which are hard and have a broad base, I prefer the knives which are adapted to the handle of Türck, and the lancet of Dr. Mackenzie. *Scissors* have been generally abandoned in laryngoscopic operations.

Galvano-caustic is an agent which has been over-estimated on the one hand, and too little appreciated on the other. Its use seems indicated in certain cases of hard growth with broad attachments, at least for cauterizing the base after partial removal by other means. It may be employed either by means of a loop or a simple point. I will show the instrument of Voltolini, whose name has become famous in connection with the use of galvano-caustic.

Fieber recommends *electrolysis* for the treatment of laryngeal tumors, but the cases which he publishes do not afford us any very accurate ideas in regard to the effect of this agent, inasmuch as he leaves us in ignorance as to the nature of the *swellings* which he states to have been successfully treated by it.

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* I am indebted to Messrs. Codman & Shurtleff for a cut of this instrument which they now manufacture, with various extremities adapted to it, viz., forceps of various shapes and sizes, caustic holder, knives cutting in different directions, &c.

It may be easily conceived that the preparatory training, which is necessary to enable the patient to bear any of these instruments, may be very long or very short, but it usually requires considerable time to be able to operate with precision, leaving nothing to chance.

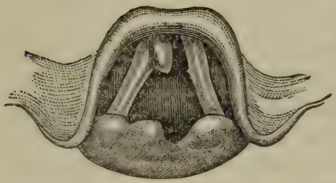
Also, after the patient is trained, the operation may be accomplished at once, or it may require many sittings, the growth being removed little by little.

If it is necessary at any time to expedite matters, I should not hesitate to use *local anæsthesia*, as practised at Schrœtter's clinic in Vienna, in case the patient was in good general condition, and neither very young nor very old. This consists in the local application of chloroform and morphia to the larynx in the following manner; twelve to eighteen hours before the operation pure chloroform is applied by means of a brush every five minutes for an hour; and then every five minutes for another hour a solution of acetate of morphia (grs. vi.— ʒ j.); the patient being reminded not to swallow, and to gargle frequently with the following:—

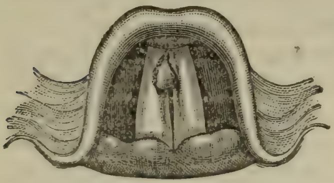
℞ Acidi tannici,
Alcohol, āā ʒ i.;
Aquæ, ℥ vi; ft. sol.

If, at the end of twelve hours, the larynx is still very sensitive, twelve more applications of the solution of morphia are to be made, as before, and so on until anæsthesia is produced. I have not had occasion to use this method here, but have seen it used in Vienna, and have myself had there the opportunity to test the sensibility of the larynx before and after its use, and there was undoubtedly very great diminution, and in one case almost total abolition of it.

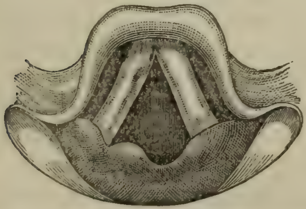
I will relate to the society one case which occurred in my private practice, in which a polyp was removed from the anterior part of the right vocal cord with the aid of the laryngoscope, with the complete restoration of the voice to its normal character. A. J. B., aged forty-four, captain of a whaling ship, consulted me Dec. 12th, 1872, with reference to his voice. He had no hereditary tendency to any particular form of disease and had never had syphilis. He enjoyed robust health—with the exception of a fever when twenty-one years of age, in Brazil, with which he was very sick but from which he fully recovered—until Sept., 1871, when he had a cold in the head, followed by cough. In about ten days, there was a marked alteration in the character of the voice, which was not very rough but high in pitch. He got rid of the cold and cough in about a fortnight, his voice improved and got nearly well, but, about the first of November, he took another cold from sleeping in a damp bed and his voice grew worse constantly, till in the spring of the present year he could speak only in a whisper for three months. In August, "after taking cider vinegar, for a week," he spoke out loud, and continued after that to speak in a peculiar, very high pitched voice (which became somewhat stronger), until the time of his visit to me. During the year in which he had suffered, he had undergone a variety of treatment, such as might be expected, before the nature of the trouble had been ascertained, which, of course, could only have been done by the aid of the laryngoscope. At the time of his first visit to me, his voice was very high pitched, squeaky, and produced with much effort, entirely unfitting him for his duties as commander of a whaler. He stated that he had had some dyspnœa for four or five years, since a shipwreck, at which time he was in the water for two hours. This, he thought, had increased a little since the present trouble. He had no cough and felt generally well. Examination of the chest showed nothing abnormal. On examination with the laryngoscope, a neoplasm, apparently about the size of a bean, was seen projecting from the upper surface and edge of the anterior part of the right vocal cord. This was grayish in color and appeared rough on its surface, more like a simple epithelial growth than anything harder.



Fibro-cellular polyp on right vocal cord. Appearance in the laryngeal mirror, during respiration.



Appearance during phonation.



Appearance during respiration, after removal of the polyp—slight cicatrix on right cord.

During ordinary respiration, the anterior part of its attachment to the cord was concealed by the epiglottis. During phonation, the neoplasm was pushed hard against the opposite cord, which showed an indentation from this pressure.

These three water colors, executed from life, by Dr. Quincy,* show the images of the larynx as seen in the laryngoscope during respiration and phonation, with the polyp; and during respiration, after it had been removed. I have, also, some large diagrams made by Dr. Quincy, which will show at a glance, to all in the room, these different conditions.

The inconveniences which I experienced in the way of operating in this case were, that the larynx was small, and the growth situated far forward. The patient had been exercised with the mirror and sound nearly four weeks, before I succeeded in seizing the growth with the tube forceps and in removing a piece of it. It was now evident that the growth was of a much firmer consistence than I had supposed, and that it could not be removed at once, as soon as I could seize it, as I had hoped, but must be removed in pieces; for, seizing the whole of it in the forceps, and exercising all the force that I dared to, it could not be detached entire from the cord.

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* The wood cuts are from the original water colors of Dr. Quincy.

The larynx was quite intolerant of most other instruments besides the tube forceps, and the complete removal of the growth in pieces was chiefly effected by means of this instrument, aided by one or two incisions from Mackenzie's laryngeal lancet, and the crushing forceps which I had made for the case. I saw the patient nearly every day, but often could not work upon the growth on account of irritability of the throat, increased at times by bronchitis, until the last four days, when it became quite tolerant of the instruments. The operations were concluded during the first week in March, and after the inflammation, due to the operation, had subsided, the voice was restored to its normal character.

The picture by Dr. Quincy, made after the operations had been completed, shows how completely the removal was effected, only a little cicatrix being visible in the position which had been occupied by the growth.

I did not use *galvano-caustic* in this case, because I had not had much experience with it, and the larynx being small and the growth being situated so far forward, I was afraid of impairing the sound tissue.

Dr. J. C. Warren made the following report on a piece of the growth which I gave him for microscopic examination. "The growth consisted of young connective-tissue cells, which were quite numerous, and were supported in a delicate fibrous intercellular substance. The surface, which on section showed a somewhat irregular outline, was covered with a thick layer of epithelium."

This case was not one of those which afford a chance for a brilliant operation, as, e.g., a pediculated polyp offers, which can be removed at once, as soon as we can take hold of it; but yet was one of those which tax our patience and our skill to a far greater degree, and the results of the treatment of which are equally satisfactory.

Gelseminum (Gelsemium) Sempervirens in Odontalgia.—Dr. J. W. Legg *(Lancet*, May 24, 1873) reports several cases of severe pains in the jaw and side of the face, arising from decayed teeth, which were relieved by the use of this drug. From ten to twenty minims of a tincture—made by macerating for a week an ounce of the root in eight ounces of proof spirit—were given every three hours. The pains usually ceased in the course of forty-eight hours. Dr. L. has not found gelsemium of marked service in lumbago, sciatica, or other pains which we are accustomed to call rheumatic.

Progress in Medicine.

REPORT ON THERAPEUTICS.

By R. T. Edes, M.D. Harv.

[Concluded from p. 285.]

Meat Tea.

Bogoslowsky *(Arch. f. Anat. u. Physiol.* 1872, 347, 428, and *Centralblatt,* 1873, p. 279), has re-examined the theories of Kemmerich in regard to the action of meat tea, which was supposed by him to depend wholly on the potash salts contained therein. Bogoslowsky says that Kemmerich used too large doses, and that the fact that a rabbit can be killed not only by a large amount of beef tea, but by the salts extracted from a similar amount, proves nothing except that both are (in enormous doses) poisonous.

With small doses the difference is a marked one. While, for example, a rabbit was killed by the injection of extract of 700 gm. (1 lb. 10½ oz.) of meat reduced to 30 ccm. (about 1 oz.), the ashes of the same quantity dissolved in 30 ccm. water produced in another rabbit only a transient acceleration of the pulse, and the animal completely recovered. Nine days after, it died in an hour and a half after the ingestion of the corresponding quantity of meat tea.

It was shown that injections of warm water cause an increased rapidity of the pulse, but of meat tea, a much greater and more lasting acceleration. The salts hardly differ from warm water, or, in larger doses, the acceleration may last somewhat longer.

The author was able to produce these phenomena to a slight degree in his own person, but in another individual did not succeed. After larger doses (10, 20, 30 gm.), in the latter case, the pulse fell while the thermometer was unchanged. After 40 gm., gastric symptoms appeared and the pulse rose. He concludes, as a practical result, that extract of meat is not so innocent a dietetic substance as is generally supposed, but always calls for care in its administration. (If Liebig's or any similar extract is here referred to, it would seem that the danger is not great unless the quantity used considerably exceeds that mentioned in the directions accompanying the packages.)

In endeavoring to determine to what ingredient meat tea owed the excess of its action over that obtained from the salts, Bogoslowsky found that kreatinin, which exists in extract of beef in considerable quantities, when injected either into the jugular vein, under the skin, or into the stomach, produced a slight acceleration of the heart's beat, but he could not get any fatal effect.

From all which, it appears that the stimulant action of ordinary doses of beef tea is due partly to the warm water, the salts and the kreatinin. It would seem, however, from the observations last quoted, that the presence of kreatinin is not sufficient to account for the difference between the action in beef tea and the salts obtained therefrom. It is only in exceedingly large doses that the salts alone are sufficient to account for a fatal effect by their depressing action upon the heart.

Leube *(Berliner klin. Wochenschrift,* 1873, Nos. 17 and 19, and *Cen-*

tralblatt, 1873, p. 491) has made use of the following method of preparing a solution of meat, to replace the complicated and costly process of Meissner with natural pepsin, which is besides objectionable on account of the disagreeable taste and smell of the product. 1000 grammes of lean beef is placed in a porcelain pot, with 1000 cubic centimetres of water, and 20 cubic centimetres of pure hydrochloric acid. The mixture is heated in a Papin's digester for 10 or 15 hours, and occasionally stirred. The mass is then rubbed down in a mortar to the consistence of an emulsion, and boiled 15 or 20 hours more, without the cover of the digester being lifted. It is then neutralized with carbonate of soda, evaporated to the consistence of a pap, divided into four portions and dispensed in pots.

The muscular fibres are broken up to a fine detritus, and the greater part of the albuminoid constituents is dissolved. The preparation is well borne and willingly taken, but it is better to use some other easily digestible food therewith, in order not to disgust by too constant use. The taste may be improved by the addition of Liebig's extract.

The solutio carnis has been used in acute gastric ulcer and in chronic dyspepsia. It is supposed to give rest to the stomach by sparing it the labor of digestion, the albuminoids being already converted into peptones.

ANTAGONISM OF DIGITALIN AND SAPONIN.

Köhler (*Archiv für experimentelle Pathologie und Pharmakologie*, I., p. 138) has examined experimentally the physiological antagonism between digitalin and saponin, the active principle of saponaria officinalis, or "bouncing bet."

The heart of an animal poisoned with saponin is in the condition of a heart whose afferent nerves, both vagus and sympathetic, have been cut, and which is kept in motion by the musculo-motor centres imbedded in the heart substance itself (so long as their excitability and muscular irritability last).

Some of his more important conclusions, as to the partial antagonism existing between these heart poisons, may be abridged as follows:

A frog's heart, brought to rest by saponin, may be set in motion by digitalin; and a heart, stopped by digitalin, can be set in motion by saponin. Digitalin acts by strong excitation of the musculo-motor ganglia; saponin by depression of the strongly excited restraint mechanism (vagus terminations) in the heart.

When the action of the heart is merely slowed by either agent, the other accelerates it.

Digitalin strengthens the beat of the heart poisoned by saponin.

Digitalin can retard for some time the diminished blood pressure produced by saponin.

It can also retard the great depression of the respiratory centre.

It cannot retard the rapid and deep fall of the temperature.

Since digitalin itself produces, in the later stages of its action, paralysis of the musculo-motor ganglia and unexcitability of the muscle, the antagonism of the two substances is not a complete one, and depends upon the stage of poisoning.

The antagonism is better marked and more lasting with small doses.

Nevertheless, digitalin can delay the fatal ending of saponin poisoning

Digitalin cannot be considered the antidote of saponin in the toxicological sense.

Whether, however, it might not be of use in poisoning by delaying a fatal termination and allowing time for elimination, further researches must determine.

(This paper possesses much more interest as a contribution to our knowledge of the modus operandi of the action of digitalis than it does from the "practical" conclusions which the author tries to draw. Saponaria cannot frequently give rise to poisoning, although some French authorities state it to have done so. The dried root is said to contain 34 per cent. of saponin, and "two to four pints of the decoction daily are recommended in lues." The inspissated juice is given in the dose of half an ounce per diem.)

PHOSPHORUS.

M. Gubler, in a paper on this drug published in *Bulletin Générale de Thérapeutique* and abridged in *The Practitioner* of July, 1873, p. 46, states that phosphorus is a diffusible stimulant of great energy and of dangerous activity. It should not be used in any affection characterized by nervous, circulatory, or trophic excitement; but in disease unaccompanied by inflammation, fever and nervous excitation, and especially in such cases as are characterized by depression of the circulation, either local or general, diminished power of generating heat, exhaustion, or local asthenia, with paralysis of sensation and movement.

It is of service in those forms of paraplegia not dependant on organic lesion, as well as in cases of cerebral disease in which all irritation has ceased. M. Gubler rather doubts the efficacy attributed to it in the various forms of sclerosis of the nervous centres. Phosphorus is an active agent which may momentarily re-illumine the fading spark, and revivify the languishing powers of life; but as it brings no energy with it, it impoverishes rather than enriches, and can do little for a nervous system exhausted by a chronic affection.

As regards the modes of administration, M. Gubler says that amorphous phosphorus is perhaps the best mode of prescribing it, as this possesses no exciting or irritating action. Solutions are usually preferable to pills. The ethereal tincture, the solution in chloroform, and the solution in oil, are spoken of.

Dr. Thompson (*Practitioner*, July, 1873, p. 13) has derived much benefit from the use of phosphorus in neuralgia. He considers the proper dose to range from one-twentieth to one-quarter of a grain. He begins with one-twelfth every four hours, as the average dose which is safe and efficacious. The treatment may, however, be begun with one-eighteenth, increased to one-twelfth after six doses.

The great obstacles to its use are the ease with which its preparations decompose and the extreme nauseousness of the fluid preparations. Dr. Thompson says that if a solution of phosphorus in superheated oil is used and enclosed in capsules, they afford an agreeable and perhaps sufficiently efficient means of administration; but he thinks that much diluted solutions are the most advantageous.

He has used two forms:—

Phosphorized oil,	ʒiii.;
Pounded gum arabic,	ʒvi.;
Spirits of peppermint,	ʒss.;
Water to,	℥vi.

Active, but extremely nasty.

Tincture of phosphorus,	Phosphorus, gr. 1. Alcohol, ʒiii.	ʒiii. ;
Rectified spirit,		ʒii. ;
Spirits of peppermint,		ʒss. ;
Water to,		℥v.

Active, efficient and convenient, not quite disgusting, unstable.

Dr. Anstie (*Practitioner*, Aug. 1873, p. 103) relates the case of a patient with neuralgia, who took one-thirtieth of a grain of phosphorus twice daily for seven or eight days, near the end of which time he suffered from a constant burning pain at the epigastrium, and his urine became albuminous and bloody. Hence it appears that there are persons who manifest a peculiar susceptibility to the poisonous action of phosphorus. In the present instance, the phosphorus seems to have exerted a beneficial influence on the neuralgia.

Saline Cathartics.

Dr. Adolph W. Miller (*Amer. Jour. Pharmacy*, July, 1873) considers the effervescing solution of tartrate of sodium an improvement on the popular citrate of magnesia, as being more agreeable to the taste, more reliable and efficient in its action as a purgative, with less tendency to tenesmus ; its forming a more permanent solution ; and its cheapness.

Congenital Hydrocele and Hernia.—In a clinical lecture upon a case of this kind, Dr. Willard Parker states (*Med. Record*, May 1, 1873), that for a good many years he had done nothing for these cases of hernia in young children as far as the application of mechanical apparatus is concerned. Formerly he used mechanical appliances, but found them to irritate the child greatly, and to do no good. When the child gets so that it can run alone, then a truss may be adjusted, and in many cases it will produce a radical cure. Very rarely will strangulation occur if no apparatus is employed. If such patients must be treated, the only thing of service before the child is old enough to run alone is adhesive plaster. This can be used very satisfactorily in cases of umbilical hernia, and in such it may be employed as early as desirable. Make a roll of adhesive plaster, a little conical, like the end of the finger, and of sufficient size to fill the opening in the abdominal wall. Return the hernia, place this roll of plaster immediately in the opening, and over this a strip of plaster reaching to the back bone upon either side. With such treatment one almost always succeeds in curing cases of umbilical hernia in children. With regard to the congenital hydrocele, it should be let alone. If it is desirable to do something, a little warm water and salt may be used night and morning. If it does not go away within a reasonable length of time, the scrotum may be pricked with a fine needle. The little holes thus made will give escape to the fluid and give rise to sufficient inflammation to close up the cavity. If this does not answer, a little thread may be passed through the scrotum, which is usually quite sufficient. In the performance of both these operations, great care must be exercised that the intestine is not wounded.

Bibliographical Notices.

The Function of the Eustachian Tube in its Relation to the Renewal and Density of the Air in the Tympanic Cavity, and to the Concavity of the Membrana Tympani. By Thos. F. Rumbold, M.D., of St. Louis.

This work of forty pages is a study of several cases of so-called patency of the Eustachian tube, in which autophony, or the resonance of one's own voice in the affected ear, was a prominent symptom. From this study, the author is led to conclusions that are in direct opposition to the opinions entertained by otologists of the present day on the following subjects: viz., 1st. The method of supplying air to the tympanum; 2nd. The density of the air within this cavity; 3rd. The cause of the uniform concavity of the membrana tympani.

These conclusions are expressed in the following six propositions:—

1st. That during the act of deglutition the Eustachian tube is not an open passage into the tympanum.

2nd. That the walls of the Eustachian tube are constantly in slight contact.

3rd. That the air continually permeates the Eustachian tube into the tympanum, thus maintaining the normal air density in this cavity.

4th. That the air in the normal tympanic cavity is not of equal density with that of the surrounding atmosphere, the air in the tympanum being rarefied.

5th. That one of the functions of the Eustachian tube is the maintenance of this normal air density.

6th. That the rarefied condition of the air in the tympanum is the cause of the uniform concavity of the membrana tympani, especially that portion of it from which "the light spot" is reflected.

The five cases which form the text of the author are of interest only in so far as they show various conditions which produce the one symptom, autophony, but the discussion of these cases, from which the above deductions are drawn, is so rambling and imperfect, and the author's knowledge of the more recent literature on the anatomy and physiology is apparently so slight that the book is of but little value. When an author attacks some of the fundamental principles of physiology, we have a right to expect, at least, a discussion of the literature of the subject; but we look in vain here for any mention of Rüdinger's histological studies, or those of other German writers.

After a careful reading of the book, we must say that the opening propositions are not proved and our physiology, at least in the points here touched upon, although it may need additions, does not yet need revisions.

Neuralgia and kindred Diseases of the Nervous System: their Nature, Causes, and Treatment. Also a series of cases, preceded by an analytical Exposition of them; exemplifying the Principles and Practice of Neuro-Dynamic Medicine. By John Chapman, M.D., M.R.C.P., M.R.C.S. London: J. & A. Churchill. 1873. Pp. xxiv.—512.

Dr. Chapman has been known for many years as an advocate of the application of bags of ice or hot water to the back, as a means of varying the circulation in distant parts of the system and as a means of treatment in many diseases. The work whose title is given above professes to be an explanation of this peculiar system of practice when applied to the treatment of neuralgia. It is, however, more than this. It is a very able and complete description of the complaint. Few authors have given so satisfactory a description of the symptoms and complications attending the disease or condition known as neuralgia. Anstie's work on the same subject is complete and accurate, but not more so than Chapman's. The chapter devoted to treatment is also exhaustive in the consideration of those methods which have been generally employed.

In two respects the present work differs from others. The views advocated by Dr. Chapman in regard to the pathology of neuralgia are the exact reverse of those held by Anstie. The treatment most highly recommended is that peculiar to himself, the so-called *neuro-dynamic*.

We cannot explain at length the grounds on which the author founds his belief that neuralgia and, in general, pain is due to hyperæmia of the cord or the nerve roots. His reasons are scattered throughout the book in detached sentences, and in no one part carefully collected into a consecutive argument. Facts of little importance in argument, which might even be used on the opposite side, are usually referred to as supporting the author's views, and this with such an assurance of their applicability, that one is led to suppose that the connection ought to be clear and that the obscurity is due to one's own stupidity.

The following passage expresses briefly the author's view and endeavor. "The proposition that there is hyperæmia of the affected nerve-centre in all cases in which pain is felt is, in my opinion, susceptible of decisive proof; for, as I shall hereafter show, by exerting a sedative influence over the spinal centre of a painful nerve, the pain may be abolished; whereas, by exerting a stimulant influence over the spinal centre of a nerve prone to neuralgia, but not actually painful at the time when the stimulus is applied, the pain may be reproduced."

His reasoning seems to be:—excessive sensation, or pain, implies increased function, that is increased action and increased vitality, therefore increased nutrition. This nutrition is not necessarily peripheral, and the activity is not, but is to be found at the "cell-roots" of the nerves supplying the parts. Still, examples of peripheral excess of nutrition are given in the course of the argument, as the heat, redness and swelling of inflammation in a limb, changes in the eye, in the skin as in herpes, erythema, pemphigus. The increased nutrition implies increase of blood or hyperæmia; this is caused by excessive action of "positive motor nerves." Cold, locally applied, causes contraction of bloodvessels. Cold to the back relieves neuralgia, therefore it is a proof that there was hyperæmia of the cell-roots.

Hyperæmia of "cell-roots" is the cause of pain because pain is relieved by cold. Cold causes contraction of bloodvessels at those roots, because it relieves pain and pain is caused by their hyperæmia. Such seems to be his course of reasoning.

When pain exists, he concludes that there is hyperæmia of the "cell-roots." No satisfactory proof of this is given. Some examples which he quotes, rather incline one to doubt this hypothesis. He also argues that, as cold contracts bloodvessels when applied locally near them, it produces contraction of the vessels of the "cell-roots" when applied to the back. This is by no means a necessary result. That cold, even when long applied, can have such an action on the vessels of the cord, needs more proof than is given. When it is considered that the skin, a thick layer of adipose tissue (a poor conductor), muscle and bone separate the vertebral canal from the ice bag, it requires more than mere assertion to prove that such an effect would be produced; especially when we consider that the conservative powers of the system, to resist injurious impressions upon vital organs, may cause the intervening tissues to receive such an amount of blood as to neutralize the cold. That the sympathetic ganglia should be thus affected, is still less probable.

The positive part of his argument is wanting in the fact that his premises are not proved; and of two conclusions, neither of which is satisfactorily proved, he uses at one time one to prove the other, and again the second to prove the first.

In the negative part of the argument, wherein he discusses Anstie's theory, he is more fortuuate, not perhaps because he reasons well, but because Anstie reasons poorly. We are glad to see that the case with autopsy, quoted from Romberg by Anstie in support of his views in which he has made such a serious mistake as to entirely reverse what Romberg said, is properly quoted and its little value in support of the atrophic theory of neuralgia is shown by Chapman, especially that, as quoted by Anstie, it is his strongest proof without which his other reasoning has as little foundation as Chapman's; and other reviews have not noticed the discrepancy between Romberg's account and the quotation.

As to the actual value of the ice bag, there can be no question. This is indeed the most important consideration. Many have used it with benefit, and many more would use it if directions were given sufficiently precise to take away an involuntary fear of doing harm by injudicious application. One would suppose that there was no danger attending the use of ice, judging from Dr. Chapman. In only one or two places does he allude to harm resulting from its use, and in those only incidentally. No careful direction is given as to how to use the ice bag, how long, at what times it should be applied, the contra-indications to its use, the accidents or inconveniences resulting from its use. Only by reading his one hundred cases can some of these particulars be learned.

Of the hundred cases, only one, No. 43, is recorded where relief or entire cure was not obtained. In that, the treatment was only imperfectly carried out and was soon abandoned. The fact that unsuccessful cases are not mentioned, and that loose general expressions are used—"in hundreds of cases I have proved by experiment that this is caused," etc., "my writings teem with facts proving the truth of the assertion,"—detract from the credibility of the book. It is to be regretted that there are these blemishes, for the method is worthy of trial, not only ice bags, but hot water bags being included, though the ice bag is more frequently employed and mentioned.

Another blemish is the use at times of a style of expression and words and phrases which are not easily understood except after careful study of preceding pages; this is perhaps unavoidably due to the propensity the author has for theorizing. To many readers, such passages as the following would convey no clearly understood meaning:—

"It may be stated as a rule that the angles of reflection of sensory impressions are generally very acute, though the exceptions to this rule are numerous. Now, when impressions are reflected at angles having the maximum degree of acuteness, they pinge, of course, either on, or extremely close to the points where those impressions were primarily received; and in the case of centric disorder of sensory nerve-centres without an eccentric cause, but with pain referred to any part of the periphery, the disorder being extended to immediately contiguous motor nerve-centres, will probably be transmitted to the region of the referred pain." S. G. W.

Clinical Electro-Therapeutics, Medical and Surgical. A Hand-Book for Physicians in the Treatment of Nervous and other Diseases. By ALLAN McLANE HAMILTON, M.D., Physician in charge of the New York State Hospital for Diseases of the Nervous System, &c. D. Appleton & Co. 1873. pp. 184.

Inasmuch as hand-books of electro-therapeutics have been increasing in number and excellence during the past few years, we looked forward instinctively, on reading the title of the work which lies before us, to finding here something better than what had gone before; more conciseness and accuracy in the statement of facts, evidence of a more scientific and critical examination of conflicting observations and opinions. In this hope we were disappointed.

In some respects, the work is a valuable addition to the general literature of the subject, but it does not possess the peculiar merits of a first class hand-book, and the author's mode of expressing himself is obscure, careless and often faulty.

The first sixteen pages, the least accurate and explicit of all, are devoted to electro-physics.

He tells us here, for example, that "all the phenomena of *tension** may be studied with the galvanometer," and that, when the galvanometer is connected with the circuit of a battery, "the deflection of the needle indicates the *tension (which is proportional to the number of elements employed)* of the current."

To show the inaccuracy of this statement, we would simply point out that in the medical batteries in common use, which are generally of high resistance, five cells will commonly give nearly the same deflection as fifty, although the tension in the latter case is tenfold greater than in the former.

After some descriptions of instruments, comes a chapter on electrophysiology. Speaking here of the action of electricity upon the organs of special sense, or in his words, "the special organs of sense," he mentions "the organ of taste," saying, "the galvanic current produces upon the tongue twitchings of that organ, a metallic taste and *flashes of light!*"

The off-hand manner in which he speaks of the effects produced, experimentally and clinically, by the galvanization of the sympathetic nerve, is in striking contrast to the critical examination which this much discussed subject receives in the last edition of Ziemsen's work.

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* Italics throughout are ours.

The bulk of the book is devoted to therapeutical considerations, and contains many interesting cases which are well worth reading, but which suffer from the company they keep in the way of general statements.

Attention is invited to the following, which is hard to credit, and still harder to parse:

"*Facial Paralysis.*—This disease, which may be produced by exposure, exudation, or pressure of the seventh cranial nerve in *some bony canal* by the product of inflammation, has its seat usually in the Fallopian canal. A syphilitic tumor in the cerebral substance may also make this pressure."

Further on he says: "By the term *hyperœsthesia,* we mean an exalted state of sensibility *in the nerve itself,* dependent upon *some change between its point of origin and periphery.* It does not *necessarily* depend upon inflammation of the nerve, for the pain of hyperæsthesia *is different* from that of inflammation."

Some of our readers may demur at the following: "It is the opinion of dermatologists, nowadays, I believe, that skin diseases are simply neuroses. * * * * * Numerous experiments substantiate the truth of this assertion, and have proved that nearly all skin diseases are amenable to electricity."

The surgical portion of the book is by far the best, and further revision might have made it excellent, both in matter and form. The reports of cases are numerous and interesting.

The number of American books which have received the criticism "wanting in thoroughness," is already full large enough. We are sorry to have to pass it upon another, and confess to feeling sensitive, in spite of the valuable matter that accompanies them, in sending so many blunders across the water for foreign criticism. J. J. P.

BOOKS AND PAMPHLETS RECEIVED.

A Treatise on Pneumatic Aspiration of Morbid Fluids. By Dr. Georges Dieulafoy. Philadelphia: J. B. Lippincott & Co. 1873.

A System of Midwifery, including the Diseases of Pregnancy and the Puerperal State. By William Leighman, M.D. Glasgow: James Maclehose, publisher to the University. Macmillan & Co.: London & New York. 1873. Pp. 835.

An Account of the Cholera as it appeared at Nashville in the Year 1873. By W. K. Bowling, M.D. Union and American Printing Co. 1873. Pp. 63.

Extrait du Dictionnaire Encyclopédique des Sciences Médicales, publié sous la direction de Dr. A. Dechambre.

Revue des Sciences Médicales en France et à l'Etranger. Recueil Trimestriel, Analytique, Critique et Bibliographique, dirigé par Georges Hayem. Paris. C. Masson, Editeur. 1873. (From Westerman & Co., New York.)

Transactions of the Kentucky State Medical Society, 1873. Pp. 168.

Epidemic or Malignant Cholera. By Alfred Stillé, M.D. Re-printed from the Philadelphia Medical Times. J. B. Lippincott & Co. 1873. Pp. 45.

The American Chemist, a Monthly Journal of Theoretical, Analytical and Technical Chemistry. Philadelphia. August, 1873. (Henry C. Lea.)

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, SEPTEMBER 25, 1873.

"THE Reward of Science" is the title of an article, in the *Medical Times and Gazette*, on the refusal of the Treasury to increase the pay of the scientific staff of the British Museum. The writer deplores the fact that there is no work in life so likely to lead to disappointment and penury as the pursuit of science for its own sake, and that there is no kind of labor so poorly paid as that of scientific men. Indeed, all scientific professions, he thinks, are fast falling behind the commercial and business classes at the present rate of remuneration. Facts go to show in Great Britain, and we think the same would be found to be true in this country, that the medical man of to-day is more poorly paid for his services than he was half a century ago. It is true that the young practitioner at the present time obtains a moderate income much more rapidly than ever before—the contrast with the success of the beginner of former years being quite striking. We doubt, however, if this apparent successful opening of a career is an indication of any unusual prosperity of the profession, which, indeed, might be much more substantially rewarded for its services than it is. It is doubtless difficult to find any remedy for such a state of affairs; but we think that the profession might do much to help and protect itself in this matter, without incurring the reproach of too great greediness for gain; a fault, by the way, which it is hardly likely that the doctors are in danger of being accused of. The great extent to which the system of hospital charities has been carried of late years has given an opportunity for gross abuse of the advantages which the public enjoy in the way of gratuitous advice and treatment; and the *New York Medical Record* has shown to what an extent this has been carried in New York. It may be said that the same is substantially true of all large cities. The proportion of patients well able to pay among those who frequent our numerous hospitals and dispensaries has reached a point that hardly ought to be tolerated even by such a long suffering and benevolent profession as our own. The really poor man is cheated out of the time which should be allotted to him alone, while the younger physicians are cut off from a certain class who should by good rights extend their patronage to him.

The article originally referred to blames, and justly we think, those men who have attained the highest round of the ladder of success, and whose position enables them to refuse everything except the most remunerative practice. The custom of charging exceedingly small fees, now in vogue with many of our most distinguished medical men, acts injuriously both on the younger practitioners and on that class of people who are well able to command their time and attention. If these men were to double their minimum charges, the result would be that the gross receipts of the profession would be largely increased from the pockets of the rich; and those of moderate or small means would be better taken care of for the same money which they now pay.

THE unfortunate man whose corpse found its way so rapidly into the vats of the Medical School of the University of Pennsylvania, was a well-known, highly respectable, elderly bachelor farmer, of Washington County; a man also of considerable means. His intellect had been somewhat impaired by an injury to the head sustained some years ago. He left home suddenly, and, a few days after, his dead body was found in the Schuylkill and taken to the morgue. In less than forty-eight hours he was within the walls of the University, injected and stowed away in the great receptacles for "material" which is accumulated during the summer season, to meet the demands of the large number of students who frequent Philadelphia in the lecture season. Had it not happened that his watch was discovered in a pawn-broker's shop, his disappearance might have forever remained a mystery. Such scandals as this are, fortunately, at the present day, exceedingly rare, and, with proper deference to the present liberal state of legislation on this subject, ought never to occur.

THE sixth annual meeting of the Canada Medical Association was held in Odd Fellows' Hall, city of St. John, N. B., commencing on the 6th of August. Dr. J. A. Grant, M.P., occupied the chair and delivered the opening address. Dr. Hingston read a paper on the "History of Surgery in America," from the early times down to the present day. Dr. Botsford also read a paper on "Hygiene." About fifty members were present. A lunch was given by the members of the medical profession of St. John, in the hall of the lunatic asylum. It was arranged that the next meeting of the association should take place at Niagara Falls, on the first Wednesday in August, 1874.

THE reports last week, concerning yellow-fever at Shreveport, were of the wildest description, the deaths numbering from thirty to forty daily. It was with difficulty that help could be obtained to work the telegraph, so many of the operators had succumbed to the disease. The fever was said to be spreading in northern Louisiana, and even Memphis had been attacked. Subscriptions, for the relief of the sufferers, are being rapidly sent from various parts of the Union.

OPIUM AND THE ACTUAL CAUTERY IN THE TREATMENT OF CHOLERA. BY C. E. BROWN-SEQUARD, M.D.—I have had considerable experience in the treatment of epidemic or Asiatic cholera. In 1849, in Paris, the number of army physicians being insufficient, some civilians, among whom I was, were called to take charge of the soldiers attacked with cholera, at the *Gros-Caillou* Hospital. In the Mauritius, at Port Louis, in 1854, I had charge of a hospital—besides a very large private practice—during one of the most murderous epidemics of cholera that have existed outside of India. Nearly 6,000 people out of a population of about 45,000, died in five weeks. Of all the means of treatment I have employed (and my trials have been very numerous) none has given by far as favorable results as the use of opium in extremely large doses. I will only mention what occurred at a convent, which seems to have been one of the great *foci* of the disease in the Port-Louis epidemic. No death was observed there, although a large number of Sisters of Charity and of young girls (the convent was a boarding-school) were attacked with either the premonitory symptoms or the confirmed and cyanotic cholera. Thirteen of those patients were seized with the most serious symptoms, and all, however, recovered, many of them, if not all, evidently owing to the treatment. For reasons mentioned hereafter, a great many of my hospital and private patients died, notwithstanding my having used opium in their case as I did at the convent. But here was the difference, and in this lies the important point as regards the use of opium against cholera: In the convent the rules given were strictly followed; they were not elsewhere.

They were, first, to give opium every twenty minutes and in large doses so long as the cholera symptoms existed, without fearing poisoning; secondly, to begin the treatment as early as possible. The Sisters of Charity acted just as I desired, and saved, as I have said, all their patients. The fear of poisoning, and many other reasons, prevented the proper application of the rules elsewhere. The preparation almost always employed was laudanum. If there was no great vomiting, or if the vomiting was checked by Rivière's potion (a carbonate and tartaric acid, taken separately one immediately after the other, disengaging carbonic acid inside of the stomach), the laudanum was given by the mouth. If the vomiting was frequent, the laudanum was injected into the bowels, but with the precaution of having a thorough washing of the large intestine by a previous enema to bring out all the contents of that tube, so that the laudanum was rarely rejected. In bad cases a dose of twenty minims of strong laudanum (Sydenham's) was used every fifteen or twenty minutes until the cholera symptoms had ceased, or *(which never occurred when cholera still showed its existence)* until some slight symptoms of opium-poisoning appeared.

I hardly need to say that this mode of treatment does not succeed when the blood has been considerably altered by the loss of a very large amount of its salts.

Of course these rules are not to be followed in cases of mere cholerine or in the premonitory stages of cholera; but even then opium in much smaller doses is also the best means.

Now that we possess a much better means of obtaining rapid absorption of the principal curative element of opium—morphine—in subcutaneous injections, it is clear that it is that substance which ought to be used and in that way. I may add that many physicians have already proposed and used subcutaneous injections of morphine against cholera.

Against the lack of urinary secretion in cholera, I have employed with benefit, in some cases, the actual cautery on the loins.

ENORMOUS ACCUMULATION OF EXTRANEOUS MATTER IN THE STOMACH.—The patient in this case was a girl, æt. 4, who died in the Hardwicke Hospital, of uncontrollable purging and vomiting. For nine months she had had a hard tumor in her abdomen, but nothing peculiar had been observed by her mother about her appetite. She never complained of any pain till two days before her death, when she was attacked with sudden colic, which lasted about an hour and recurred twice. The tumor was large and hard, and was freely movable. At the autopsy it was found to be composed of a collection of extraneous matters, such as pieces of cloth, cord, straw, grass, chips of wood, &c., which were all matted together into one large mass occupying the entire cavity of the stomach. A similar aggregation was found near the end of the jejunum. The rest of the intestine was empty and healthy throughout, with the exception of a large ulcer which existed in the duodenum over the head of the pancreas. Dr. Yeo, by whom the specimen was shown at the meeting of the Dublin Pathological Society, considered the case interesting as showing the difficulties attending the diagnosis of the disease called *pica*, when the peculiar aberration had never been observed. The amount and position of the aggregation were also unusual. The ulcer in the duodenum seemed to support the idea that some irritation in the alimentary tract is the usual cause of the disease.—*The Medical Press and Circular*, April 2, 1873.

THE following extract is taken, *verbatim et literatim*, from the *Medical Investigator*, of Chicago (homœopathic):—

"In the proving of drugs, certain effects are produced which point unmistakably to the condition of the organism resembling the effects of the moral emotions, which fill a vacuum unsupplied by other schools. And so true is found to be this universal law of like for like, that the mariner steers not his ship more unerringly and with more confidence through the trackless waste of water, guided alone by his compass, than relies the homœopathic practitioner upon *aconite, opium* and *pulsatilla*, for the effects of fright; *coffee* for excessive joy; *colocynth* for indignation; *hyoscyamus* for disappointed love; *ignatia* for grief; or *nux* or *chamomilla* for the effects of a fit of passion."

Correspondence.

POISONING BY ARSENICAL WALL PAPER.

MESSRS. EDITORS,—It has been suggested to me that my recent personal experience with arsenical wall paper will be of interest to the profession. I recount the circumstances the more willingly, because an opportunity is thus afforded me of testifying to the direct practical benefit which is conferred by the publication and distribution of such reports as those of the State Board of Health of Massachusetts.

On arriving with my family at London, England, on Feb. 15th, 1873, we entered into the occupancy of three exceptionally clean and pleasant rooms in a lodging-house situated in the vicinity of Russell Square; in Thackeray's time, this was the most fashionable quarter, and it is now regarded as one of the healthiest districts of that great metropolis of 4,000,000 souls, which, according to our minister, Gen. Schenck, possesses an atmosphere but no climate.

The need of rest after several weeks of sight-seeing and shopping in Paris, together with inclement weather, confined my wife to the house for some days; my child, one year old, was, likewise, seldom taken out of doors. I was at the hospitals as long as daylight lasted. For a week or two, we were comfortable enough, though I noticed with regret that my wife did not regain her lost strength, as I had reason to expect she would.

About the middle of the third week, I was surprised at finding a large felon on the child's thumb, to explain which I was fain to suspect the presence of a broken needle or splinter, in lieu of any definable cause, although neither of these foreign bodies could be detected; the felon, on being lanced, healed rapidly.

During the third week, my wife's strength and appetite began to fail; she woke every morning with a headache; had a few colicky pains, but no characteristic symptoms were evinced. On Wednesday morning of this week, the nurse called my attention to the child's eyes, which were glued together, and reported at the same time that there had been a constant overflow of tears for several days, as well as a loss of appetite and much fretfulness. On examination, scarcely any injection, either of the orbital or palpebral conjunctivæ was discernible, but considerable mucus was found adhering to the eyelashes. The lachrymal ducts appeared to be pervious, so that the excessive discharge must have been due to a hypersecretion (epiploa) and not to obstruction of the natural drainage tubes (stillicidium lachrymarum). The fact of its occurrence in both eyes and its not being attributable to any manifest, local or constitutional cause, awakened my suspicions.

The perusal of Dr. Draper's valuable paper in the second Report of the State Board of Health, shortly after its publication, had rendered me familiar with the symptoms of chronic poisoning by arsenical wall papers. Casting about to discover the *origò mali*, I was guided, by the knowledge thus acquired, to examine the paper covering the walls of our rooms. It was of a pale greenish tint, unglazed, and had the color so loosely attached that whatever came in contact with the wall was covered with a green powder. Any lingering doubts, that I still entertained, of the correctness of my diagnosis were speedily dissipated by a comparison of the paper with the specimens included by Dr. Draper in the report above cited. It coincided exactly with the lightest of the three shades there given. To make conviction more certain and to satisfy the very natural objections of my landlady, however, I requested my friend, Dr. Paine of St. Thomas' Hospital, to analyze the paper; this he very kindly did, and reported the presence of a large amount of arsenic.

It should have been stated that the rooms had been recently re-papered and painted, and that we were the first occupants after the renovations were completed.

We left the next day for the Isle of Wight, where a fresh invigorating atmosphere, charged with nothing more noxious than salt and iodine from decomposing seaweed, soon restored the two invalids to their wonted good health.

At a later period, it transpired that the workmen employed to remove the paper from the walls, were rendered ill by that work, as were those, likewise, who had originally hung it; the nature of their symptoms was not made known to me.

There was nothing very peculiar about the two cases which I have related, except the remarkable rapidity with which the poisonous inhalations gave rise to manifest symptoms ; headaches, loss of appetite, emaciation, general malaise, colic, &c., testifying to the great amount of the poison introduced into the system in less than a month. The possibility of so rapid an absorption must be admitted, when we reflect upon the extremely loose attachment of the color, which would make a resort to the recently demonstrated emanations of arsenuretted hydrogen, in the otherwise pure air of rooms, quite superfluous. That the atmosphere must have been filled with floating particles of the arsenical coloring matters is further shown by their direct irritant action upon the conjunctivæ.

My exemption from being affected was undoubtedly due chiefly to my absence from the rooms during the better part of the day, and perhaps also, in a measure, to my small susceptibility to such impressions. The nurse had also been exempt, except for a slight "weakness of the eyes ;" she, however, had not joined us until March 1st, and had, therefore, been exposed for a short time only.

Our escape from serious and, possibly, from life long suffering may, I am convinced, be justly attributed to the publication of Dr. Draper's paper in the Report of the State Board of Health, which, by bringing freshly and vividly to my mind the symptoms of chronic arsenic poisoning, enabled me to make an early diagnosis of the affection, and to confirm this by a comparison of the wall paper with the specimens there given.

That the reports are of inestimable practical utility to the community is made evident by these cases, which may be taken as types of many others.

I am very truly yours, JAMES R. CHADWICK.

123 *Boylston St.*, *Boston*, Aug. 1873.

MESSRS EDITORS,—At the quarterly meeting of the Rhode Island Medical Society, held in Providence, Sept. 17th, the following resolution, introduced by Alexander R. Becker, M.D., of Providence, was, after earnest remarks from several of the leading members, unanimously passed.

"Resolved : That, in view of the disastrous effects occasionally arising from a continued use of powerful remedies without due medical authority, the Rhode Island Medical Society earnestly requests the dispensing apothecaries of the State to positively decline renewing prescriptions containing toxic or narcotic remedies, without fresh authority from the prescribing physician."

The secretary was also directed to forward a copy of the resolution to the State Board of Pharmacy.

Would it not be well for the JOURNAL to press similar action on the other State Societies ? If the matter were followed up, we might even get laws enacted to prevent this unauthorized renewal of prescriptions, the evils of which are well known to every practitioner.

I am, gentlemen, very truly yours, ALEXANDER R. BECKER.

Providence, Sept. 18, 1873.

SMALLEST ANGLE OF DISTINCT VISION.

MESSRS. EDITORS,—I see it stated "in the books" that the smallest angle of distinct vision is about one second.

On going out this morning to see if the frost had cut down my squash-vines, I noticed the grass covered with spider-webs. I could easily see a single thread, when the sun shone upon it, at seventy feet distance.

On measuring a thread with the microscope and micrometer, I found it to be $\frac{1}{25.000}$ of an inch in thickness. At seventy feet, this would therefore subtend an angle of less than the hundreth part of a second.

Yours respectfully, "COUNTRY DOCTOR."

Medical Miscellany.

WE are glad to learn that it is intended to devote a portion of the immense wealth of the late Duke of Brunswick, towards founding a Faculty of Medicine at Geneva.

DR. CARL RUDOLPH BRAUN, the renowned Professor of obstetrics and gynæcology of the University of Vienna, has been raised to knighthood, with the title of "Fernwald."

THE distinguished surgeon Nélaton is dead. It was at one time hoped that he was in a fair way of recovery from his severe illness. On Saturday last, however, a relapse suddenly occurred when he sank rapidly, and died during the night.

PHYSICIANS who have received circulars relating to cerebro-spinal fever and school hygiene, are respectfully asked to send replies to the undersigned, on or before October 1st.

GEORGE DERBY, M.D.
102 *Charles St., Boston.* *Secretary of State Board of Health.*

COD LIVER OIL BREAD should contain about seventy-five grammes (five tablespoonfuls) of oil to the pound of bread, and three ounces of milk. Small loaves may be made, weighing 150 grammes and containing only two spoonfuls of oil. They are very white and pleasant to look at, and have so little taste of the oil that both children and adults eat them with ease. Thirty-four of these rolls are delivered every day at the *Enfants Malades* for the use of M. Bouchut's little patients, and the children look out for them with pleasure. They are easily digested and create no repugnance whatever. In private practice, adults make use of them as their ordinary diet.—*Bulletin de Therapeutique.*

A NEW USE FOR OLD STOCKINGS.—Apropos of impromptu fracture apparatus, we copy the following paragraph now going the rounds of the medical journals. We have often found the stocking a valuable substitute for the roller in bandages. "The broken limb is first bandaged with an ordinary roller; this is well coated with the gum and chalk mixture; a stocking is slipped on over this and similarly coated; another stocking is put on over this; and a fine layer of gum and chalk over all. This, for a case of transverse fracture, with a little starch or plaster of Paris, supplies a very neat and serviceable splint."

PROFESSOR ROKITANSKY. This distinguished ornament of the Vienna Medical School has announced to the Professoren-Collegium that next year he will have attained his seventieth year. According to the regulations, he should then retire from his professorship and be placed on the pension-list. It seems, however, that, seeing the great loss his retiring would inflict upon the Vienna School, of which he may almost be considered the founder, an effort will be made to have his case regarded as an exceptional one, as long as his present good health and teaching power continue.

A WAX CANDLE IN THE BLADDER OF A FEMALE.—This interesting case was observed a short time ago at the Hôtel Dieu, Paris. The patient, on admission, complained of intense pain in the abdomen. The urethra, abnormally dilated, easily admitted the finger into the bladder, when a hard, voluminous body was felt. The woman stated that, on account of great difficulty in making water, she had passed a candle through the urethra and had accidentally let it slip into the bladder. It was readily removed with a pair of pincers. The end of the candle, which had been rounded with a knife, was covered with calcareous matter gathered there during the five weeks the candle had stayed in the bladder. Speedy recovery followed.

THE medical societies are about to resume the meetings suspended during the summer. The first meeting of the "Suffolk District" takes place on Sept. 27th; of the "Sciences," on Sept. 30th; of the "Observation," on Oct. 6th. The "Obstetrical" also resumes shortly. The "Improvement" has continued during the summer as usual. We shall take special pains to keep our readers currently informed of the proceedings of the Boston Societies, and hope that the secretaries of societies throughout New England will favor us with frequent reports.

THE friends of legitimate medicine, everywhere, will be gratified to learn that the homœopaths are not, after all, to hold professorships in the school at Ann Arbor. The legislature of the State of Michigan passed the law requiring the appointment of the "infinitesimals," but the board of regents declined to execute it. The supreme court of the State refused to grant a mandamus requiring the regents to comply with the law, whereupon the latter met and passed, with but one dissenting voice, the following very dignified and sensible resolution: "That we maintain the position heretofore taken, and decline to make the appointments required by law; that we do this in no spirit of factious opposition to the apparent will of the legislature, but because we believe the true and best interests of the university demand it; that we re-affirm the former action of the board expressing a willingness to take official charge of an independent school of homœopathy, and connect it with the university, whenever the means shall be provided for the payment of professors.—*Canadian Medical Times.*

SNOW AND BOGGS, ON GLYCERINE AS A VEHICLE FOR ASTRINGENT MEDICINES.—Dr. Snow (*British Medical Journal*, June 28) points out that the astringent metallic taste which remains in the mouth after the administration of tincture of perchloride of iron, and which is but imperfectly disguised by the syrup or spirit of chloroform usually prescribed for the purpose, may be obviated by the use of a small quantity of glycerine—about half an ounce to an eight-ounce mixture. Dr. Boggs, in commenting on the above (*British Medical Journal*, July 5), says that he has for a long time adopted the plan, with the additional object of counteracting the astringent effect of the perchloride of iron on the bowels. He suggests that glycerine might, with advantage, be substituted for syrup in cases where the latter is prescribed as a vehicle for preparations of iron, cinchona, rhatany, &c., which have a tendency to constipate. He also refers to the superior solvent and keeping properties of glycerine.

MORTALITY IN MASSACHUSETTS.—*Deaths in eighteen Cities and Towns for the week ending September* 13, 1873.

Boston, 148—Charlestown, 18—Worcester, 18—Lowell, 33—Milford, 3—Chelsea, 8—Cambridge, 28—Salem, 12—Lawrence, 11—Springfield, 9—Lynn, 21—Gloucester, 2—Fitchburg, 2—Newburyport, 6—Somerville, 8—Fall River, 21—Haverhill, 8—Holyoke, 5. Total, 361.

Prevalent Diseases.—Cholera infantum, 92—consumption, 39—scarlet fever, 17—typhoid fever, 16—dysentery and diarrhœa 12.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, Sept. 20th, 155. Males, 76; females, 79. Accident, 7—apoplexy, 2—inflammation of the bowels, 2—disease of the bowels, 2—inflammation of the brain, 1—congestion of the brain, 1—disease of the brain, 7—cancer, 1—cholera infantum, 23—cholera morbus, 1—consumption, 16—convulsions, 4—debility, 6—diarrhœa, 5—dropsy of the brain, 1—drowned, 1—dysentery, 1—diphtheria, 2—scarlet fever, 8—typhoid fever, 14—disease of the heart, 2—intemperance, 2—disease of the kidneys, 1—disease of the liver, 3—congestion of lungs, 2—inflammation of the lungs, 4—lead poisoning, 1—marasmus, 7—noma, 1—old age, 2—paralysis, 3—premature birth, 7—pyæmia, 1—puerperal disease, 1—rheumatism, 1—scrofula, 1—tabes mesenterica, 2—teething, 3—whooping cough, 1—unknown, 5.

Under 5 years of age, 79—between 5 and 20 years, 15—between 20 and 40 years, 29—between 40 and 60 years, 14—over 60 years, 18. Born in the United States, 112—Ireland, 25—other places, 18.

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Original Communications.

IVORY EXOSTOSIS.

By W. C. B. Fifield, M.D., Boston.

The text of this article is furnished by a preparation in the Warren Anatomical Museum, No. 1465, accompanied by a photograph, No. 1464, called, in the catalogue, "Ivory Exostosis of the Frontal Region." The following history of the case is given in the catalogue:—

"Farmer, æt. twenty-four years, entered the hospital. Three years previously he fell upon the ice, struck his forehead, and just afterwards a tumor appeared. On admission, the tumor extended from the left temple to just beyond the median line, and from the roots of the hair downward into the orbit. Eye protruded and was displaced downward and outward. Oct. 19th, an operation was performed, when a thin shell of bone, deficient at various points, was found expanded over the tumor, and, between the two, a quantity of degenerated pus. Two slices of the tumor were removed by an amputating saw, and then with the mallet and chisel the remaining portion was cut down to a level with the frontal bone and gouged out of the orbit, so that the eye could be restored to its natural position. There was not the slightest sign of vascularity in the tumor. On the 24th, the patient died, having had delirium and coma.

"On dissection, the tumor was found to project internally as it did externally, and to compress the left anterior lobe of the brain which had been converted into an abscess. The right hemisphere, where in contact with the left, was sloughing and purulent for the space of a square inch, but the meningeal inflammation was slight. In structure, the internal, like the external portion of the tumor, was uniformly dense throughout and nowhere cancellated; but from its color and general appearance it would seem to have undergone necrosis, though, being so devoid of vessels, this could not easily be determined. It was loose in the framework of the frontal bone, whereas, when operated upon, it was perfectly fixed. There was also a bony shell about the internal portion as about the external, but without the intervening puriform substance, and the tumor itself was invested with something like a membrane that was easily wiped off, and that was not observed on the external portion. The growth seemed to have its origin in the frontal sinus or the diploe of the frontal bone, the bony shell about it being, probably, the expanded inner and outer tables of the bone."

On inspection of the preparation, one is struck with the entire inadequacy of the operation practised, to do more than temporarily relieve the jammed and crowded eye. The great severity of the operation, and, to some degree, the termination of this case as well as others, seem to have proceeded from ignorance of the pathology of the affection, leading to an irrational operation.

Light appears, however, to have broken in upon our darkness, and henceforth we may hope that the diagnosis, pathology and treatment of ivory exostosis will be as well established as that of any other morbid growth of the body.

Certain peculiarities of this exostosis seem to have been known from an early period. Mackenzie says, in his work on Diseases of the Eye, in 1828, " Exostosis may spring from any side of the orbit. We might, perhaps, suppose it more likely to grow from the floor or from the temporal side of that cavity, than from the thin bones which form its roof and nasal side, but this does not appear to be the case." Such exostoses likewise affect the facial bones, as in the case of the son of the surgeon of Perpignan.

Mr. Travers told us of exostoses of the orbit being removed while yet cartilaginous, that these growths could become necrosed and that that they also sprang from the antrum.

Mackenzie also quotes a case from Benjamin Bell, where a peasant succeeded, when a surgeon had failed in removing an exostosis which had pushed an eye nearly out of the socket, by cutting *around*, not *upon* the growth, and applying a secret remedy.

All this indicated: 1st. That these growths sprung either from, or in the immediate neighborhood of, a cavity lined with a mucous membrane. 2nd. That they were originally vascular, else how could they have taken on necrosis. 3rd. That they might be found *in the juice*, so to express it, i.e., in the cartilaginous state. 4th. That to successfully remove them, the circumference of the growth must be attacked and not the surface. Lastly, we may state that what was true of the preparation serving us for a text was found true of all preparations of the kind; that, after maceration, they were found loose in the bone; that they were, as the French say, "*enclavé*," but not indissolubly soldered to the bone, bearing perhaps the same relation to it that an epiphysis does to its diaphysis in early life.

Here the matter stood. Surgeons had, with much sweat and toil, hammered and chiselled at the growths, when, in 1851, M. le Prof. Verneuil found, at the inferior part of the maxillary sinus of a young man twenty-five years old, two or three extremely hard elevations, due to concretions adherent to the mucous membrane. They were scarcely as large as the head of a pin, and were formed of osseous tissue. They were already adherent to the walls of the cavity, but, nevertheless, could be dissected up by a delicate scalpel. M. Verneuil drew no conclusion from this discovery, and MM. Denonvilliers and Gosselin were the first who thought that exostosis of the sinuses originated from the mucous membrane. Many morbid anatomists verified this thought, and, at a discussion at the Société de Chirurgie, in 1856, when M. Lenoir presented a specimen, M. Grinaldes said that he had seen many examples in the Museum of London, and that Holmes Coote had sent him a note speaking of a beautiful specimen in the collection at St. Bartholomew's Hospital.

From these different labors, the following conclusions resulted :—

1st. That these tumors commence by points of a grayish white color, in the substance of the mucous membrane which covers the nasal sinuses. (They are always found covered, in some part, with a mucous membrane, even when large in size, as proved by the text case.)

2nd. That the hyaline matter which they enclose becomes, at length, osseous.

3rd. That they quickly become adherent to the subjacent walls. (They occur mostly in youths, when the mucous membrane is active and irritable, as shown by epistaxis.)

4th. That they have a great tendency to increase, and in all probability it is from the deep layers of the periosteum, where the phenomena of the growth of bone take place, that their nutrition is drawn. Let it be here remembered that the mucous membrane of the facial cavities is of the order of fibro-mucous membrane and constitutes here a true periosteum.

It is not only in the human species that these productions have been observed. M. Am. Forget has found a large number of small ones in the sphenoidal sinuses of horses, and M. Goubaux has described some very large ones which had invaded the cerebral cavity. These productions have formerly been described as ossifications of the brain, and the observations of Howship, as well as the famous case of the fish woman of London, prove that, in human beings, these tumors can take the place of the brain which they drive into the back part of the skull.

To the other observers, may be added the names of Michon, Maisonneuve and Pamard.

If we allow the premise that ivory exostosis springs from a mucous membrane, we must allow some conclusions which may appear startling.

It must be admitted, firstly, that these exostoses are free in the cavities in which they take their origin, save their attachment to the mother tissue.

Secondly, that they are vascular, cancellated if you like; that their eburnation is a proof of this, as only intense vascular action can produce eburnation and the characteristic quick growth. In this very element of superabundant life, lies the element of their destruction, the vessels or cells depositing at their termination organic matter, thus gradually strangling themselves and tending to end by necrosis, the increase being from base to apex.

Thirdly, to destroy them, the nutrient vessels at the seat of implantation must be severed; to attack them from the surface is idle trifling. M. Dolbeau, in operating at Hôtel Dieu on one of these exostoses, saw, at the moment of separation, so much blood poured from the divided vessels of the neoplasm, that the state of the patient was extremely critical, and when the separation was accomplished, he was obliged to stop with wax a great nutrient vessel situated in the partition between the two frontal sinuses. M. Richet also saw, in one of his own cases, blood come in abundance from a number of gaping arteries. The reason the operator, in the case taken as a text, did not meet with even the slightest bleeding, was that there were no vessels there. He was dealing his blows upon a dead tissue. Had he got at the pedicle it would have been different.

The origin of the tumor, in the textual case, from the mucous membrane of the frontal sinus, is shown by the concrete pus (which was in all probability mucus, *not* pus) found beneath the external sheath, that is, the anterior wall of the sinus. The membrane over the internal projection of the tumor may be supposed to be the relics of a mucous membrane.

This case, as well as some others, appear to date from a *blow*, received in falling or otherwise. One can hardly believe they owe their origin to this, but it may be believed, either that their growth was hastened by such an event, or that it only helped to remove a resisting wall, already pressed upon by the tumor.

The diagnosis being established, prognosis can be quickly made. The growth may increase to such an extent that life is no longer possible. It may, perchance, become stationary or take on necrosis and be expelled spontaneously; or it may be necrosed, and afterwards be removed by the efforts of art. It may also be removed without necrosis.

From the foregoing statements, we may advise either a wise forbearance from any active interference, or propose a removal of the entire growth, which may now be urged with the more propriety, since we are founded in the belief that the growth, to a certain extent, lies free in the cavity in which it originated. If, after a careful estimation of the extent of the tumor and its probable ramifications, we determine upon removal, how shall we set about it? Certainly not by attacking its surface. Not only would this do no good, but it would expose the patient to the dangers of meningeal inflammation and cerebral abscess, if not followed by death from the rude shocks of hammering and chiselling. This was the case with patients upon whom Roux and Jobert expended their efforts and whose skulls may be seen at the Musée Dupuytren and at Val de Grâce. If, however, the extent of the tumor forbade its extirpation, they removed only the part most pressed upon, as, for instance, the eye, in our text case.

M. Bouyer (de Saintes) in 1840, although not cognizant of the pathology of the affection, "placed," says M. Richet, "before a case, and pressed by necessity, invented the best method of extirpating exostosis of the frontal sinus." But we are also under great obligations to M. Dolbeau, who, in 1864, encountered at Hôtel Dieu a case of ivory exostosis of the frontal sinus in a young man, and, resting on a firm base of sound pathology, proceeded to its removal. Believing it would be found free in its cavity, it occurred to him that if he could open a wide enough gateway he could pull it out. Acting on this belief, he proceeded thus: the anterior wall of the sinus having been well cleared away from around the growth, he attempted to extract it. In this effort, it broke into two portions. The second part of the operation presented more difficulties; in fact, the posterior hemisphere of the exostosis opposed such a resistance to extirpation, and so much blood was lost, that the life of the patient was, for a time, in much hazard. Finally, these troubles were surmounted, the débris of the growth were removed, and the operation terminated, but, as has been said, the hole of the great nutrient artery of the tumor, "situated upon the partition of the two frontal sinuses," was stopped with wax. The patient fully recovered.

M. Richet also removed an ivory exostosis of the frontal sinus, with like success. "A young miller," says M. Richet, "came to me with an exostosis of the right frontal sinus. After uncovering the salient part of the tumor, which was smooth and rounded, I reached the portion adherent *(enclavé)* to the frontal bone, which formed a sort of pedicle. Seizing this with strong forceps I tried to shake it, but uselessly. I then introduced, between the internal orbital apophysis and a portion of the circumference of the tumor, a long and strong lever of steel, made expressly for the purpose; then by a rocking movement, a crack being heard by all present, the exostosis became movable. I could then seize it, shake it, and pull it out with strong tooth forceps."

Maisonneuve, in his two cases, had the good fortune, in the midst of his hammerings, to chip off a bit, revealing a pedicle which he immediately severed. Lenoir, after having in his case found the pedicle, detached it with a chisel struck with a mallet. In these cases, we see that there is a pedicle or basic attachment which must be separated.

It is proper to say here, that M. Richet, whilst recognizing the pathology of the affection and acquiescing heartily in the plan of battle, yet holds that the exostosis does not lie free in the cavity, but is closely adherent, although not affirming it to be one with the skeleton. It seems, on the contrary, to be attached in the same way as the epiphysis, and may at length become, in old age, one with the skeleton.

That ivory exostosis of the frontal sinus may be spontaneously loosened sufficiently to be extracted without difficulty, is shown by the case of Mr. Lucas, quoted in Mackenzie's work on Diseases of the Eye, where an exostosis appeared at the inner angle of the orbit, after a blow from a cow's horn. The eye hung pendulous and loose beyond the external edge of the outer angle of the orbit. (Proof of the origin of the tumor from the sinus.) Mr. L., to ascertain the nature of the tumor, which, although hard, appeared loose, made a horizontal incision through the upper eyelid, about an inch in length. On separating the edges of the wound, the tumor was found to be a solid piece of bone, covered by the common integuments and a thin membrane, somewhat resembling periosteum, to which the tumor was but slightly attached. The incision did not heal, but continued nearly its original size, discharging a small quantity of thin pus. The bone continued to increase in size, and the eye was still more pushed out of its natural position. At length, September, 1802, seven months from its first appearance, the patient being in perfect health, the bone became carious, evidently loose, and pushed somewhat forwards. Mr. Lucas endeavored to extract it, by making an incision round the edges of the former wound, and seizing it with strong forceps. The first attempt failed; a second, made a few days afterwards, succeeded, Mr. Lucas extracting, without much force, a piece of bone of oblong shape, weighing an ounce and two drachms, hard, solid and smooth. The extraction was followed by no bleeding. The cavity left was found to be lined with a strong membrane, smooth on its upper and inner sides, but somewhat uneven on the side next the eye. Section of the tumor proved it to be an ivory exostosis. In no part did it show any signs of fracture. This contradicts the idea of bony attachment to the skeleton, and strengthens the comparison to an epiphysis which is also sometimes cast loose by suppuration.

Thus, then, ivory exostosis always originates on or in a mucous membrane lining bony cavities, as the antrum, nasal fossæ, ethmoidal cells, frontal sinus, &c.

Since it is now known that these growths, particularly those of the frontal sinus, are independent of the cranial cavity, and usually of the orbit likewise, one can operate more boldly. The observation of M. Maisonneuve, in the *Archives*, is in point:—"When I felt this enormous tumor, which seemed to come from the very recesses of the cranium, start, it was a moment full of emotion. In what state should I find the walls of the orbit, the eye itself, and the organs which give to it motion and life? These reflections had only the duration of a flash of lightning, because the instrument had scarcely penetrated the orbit when the tumor was thrown out at once. I then introduced my finger into the orbital cavity, and felt a lively satisfaction in finding that the deep cavity communicated neither with the cranium, nor with the nasal fossæ, and that the eye and its accessories were untouched."

BITE OF THE DIAMOND RATTLESNAKE (CROTALUS ADAMANTEUS).*

By A. Mitchell, M.D.

During my residence on the St. Illa river, in Southwest Georgia, on the 1st of April, 1864, I had occasion to attend a very severe bite of this venomous reptile, in the case of a colored boy, about fifteen years of age.

He was struck, about six inches above the external malleolus, on the outer edge of the gastrocnemius muscle, the leg being bared, and treading directly on the snake, while in the coil. The fangs entered deeply, inflicting a severe wound, when by his convulsive spring he tore them from his leg.

After receiving the bite, he ran about four hundred yards, and fell, in a convulsive tremor. The cries of his mother brought me to his side, in ten minutes. I quickly applied tight ligatures above and below the knee, with firm compression over the popliteal region, and then made three incisions over the region of the wound, nearly an inch in depth, from which flowed freely a dark grumous blood. Large doses of carbonate of ammonia were freely administered, the bleeding encouraged by sponging the wound with warm water, and then the piston-cups were applied and kept on for about forty minutes, until red arterial blood began to flow. My patient then becoming very weak, I withdrew the cups, after taking twenty ounces of blood. The pulse being depressed, with subsultus continuing, I administered two ounces of spiritus frumenti, with a little water, and had him removed to his home, and placed on his bed; the lower cord around the knee was then removed, and likewise the compression at the popliteal region.

Appearance of the patient much changed; great agitation, stupor, tremor, and prostration of the vital powers. Leg and thigh quite swollen; removed the upper ligature, applied pulvis nucis vomicæ to the wound, and enveloped the whole limb in a poultice composed of young fern, bruised and saturated with a strong alkaline solution. Pulse 130, small in calibre; great thirst; skin cool;

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* There are three species in the family—the *Diamond* rattlesnake, with the most poisonous virus of the North or South American continent; the *Banded* rattlesnake, whose virus is not quite so effective, but is destructive of human life; the *Ground* rattlesnake, of an inferior size, whose virus will not destroy human life, whose bite produces a chronic ailment, with pain and periodical swellings of the limb bitten, affected by transitions of temperature similar to that of a gun-shot wound.

twitching of the muscles quite subsided, with the exception of some trembling of the muscles of the thigh; great pain in the region of the wound and along the course of the nerves of the leg and thigh. Skin harsh and dry; ethereal anodyne administered; carbonate of ammonia continued in smaller doses; had a restless night.

2nd day.—Visited him early in the morning; found him feverish; pulse 120, and contracted; countenance anxious. Stupor continues, accompanied with depression of the nervous energies. Sensation of coldness over the whole body. Calls frequently for water, and rejects all nourishment. Slight twitching of the limb. Took three ounces of blood with the cups, just above the wound. Continued the alkaline poultice, with pulvis nucis vomicæ to the wound. Administered half a grain of podophyllin, with five grains of Dover's powder. Small doses of carbonate of ammonia continued. Ordered chicken broth; he swallowed a half-cupful with difficulty. Visited him in the afternoon. Leg and thigh much swollen to the hip-joint; bathed the limb with a strong decoction of arnica and applied a firm roller, to be kept wet with the same. Visited him at 9 o'clock in the evening. Symptoms much the same, with sanious fluid escaping from the wound and smaller incisions. Fomented the limb with warm soap suds, and dressed with unguentum hydrargyri nitratis.

3rd day.—Visited him at day-break. Had some rest, from the ethereal anodyne; limb much swollen and sensitive to the touch. Scarified the thigh; a yellowish serous fluid escaped from these incisions. Pain quite abated. Continued the roller and bathing with arnica. Constitutional symptoms somewhat improved; stupor less; pulse more regular, slightly tremulous. Nothing passing his bowels from the date of the injury, gave him an active cathartic, which produced a free bilious evacuation. Countenance, towards the close of the day, looks better; the pallor, shrinking of the features and sinking of the eye, improved; notices his dog; took some nourishment, the first he has taken since the bite, except the half cup of chicken broth.

4th day.—Visited him in the morning. General appearances better; constitutional excitement abated, pulse nearly natural, little above the normal standard; swelling of the limb subsiding; perfectly conscious; yellowish serous fluid still oozing from the wounds. Roller and arnica continued with simple dressings; gave him a dose of castor oil. No aggravated symptoms made their appearance afterwards; appetite returned and he relished his food. On the 8th day, I allowed him to sit out-doors. He had a protracted convalescence, his recovery not being complete until the following month of September; a tonic was used composed of tincture nux vomica and equal parts fluid ext. opium, twelve drops three times per day, with occasional use of the pills of podophyllin. This case presented an unusual symptom, as he would swell to such a degree, at stated periods, that his natural appearance was hardly recognizable; this quickly disappeared under simple treatment. Discharged, perfectly cured, the middle of September, 1864.

It will be seen that the boy was struck upon the bare surface, his trowsers being rolled above the knee, the fangs entering deeply with the poisonous virus, into a region where the absorbent vessels are distributed freely. The vital and chemical qualities of the blood and its constituent properties are almost instantaneously annihilated by the active conveyance of this virus through the absorbent system to the vital fluid. This boy was saved by the circumstance of my being on the spot directly after he received the bite. The cups and ligatures are hints from the aboriginal mode of treatment in like cases.

Portland, August 8th, 1873.

Contusion of the Hip.—In a certain proportion of injuries to the hip induced by a fall producing a direct blow, although no signs of fracture can be detected, excruciating pain is experienced, aggravated by motion, and accompanied by a partial loss of power over the movements of the limb, which symptoms may continue for an indefinite period—sometimes even during the remainder of life. In these cases, the inquiry is, *What is the pathological condition giving rise to such a high degree of sensitiveness?* Dr. Charles H. Richmond throws some new light upon this important question, having had the good fortune to obtain a *post-mortem* in the case of a lady seventy-nine years old, who died of cancer seventy days after the receipt of the injury by fall. The only lesion discoverable was disease of the round ligament at its cotyloid extremity, it being softened, discolored and disconnected from the acetabulum. Its femoral extremity was normal, as were also the cartilages of the joint and other ligaments. In this case, acute inflammation of the ligament was probably induced, which rendered it very sensitive to the slightest movement of the joint. The loss of power over the limb may be ascribed, at least in part, to the exquisite sensitiveness.—*New York Medical Journal*, May, 1873.

Lying-in-Hospital at Jerusalem.—This hospital, established by the Baroness B. de Rothschild, is doing excellent work, and proving a precious boon to the poverty-stricken inhabitants of the hallowed city. Dr. Loudon, the director of the institution, lately issued a report, from which we find that 120 females were received at the hospital during the past year; 48 of these were born in Jerusalem, 24 were Russian born, and 19 came from various parts of Turkey. Each inmate on leaving receives a donation of ten francs, and clothing for herself and child. The early period at which marriage is celebrated in Palestine is shown by the fact, that two of the mothers were only fifteen years of age; three had reached sixteen years; five, seventeen years; nine, eighteen years; four, nineteen years; and fifteen had reached their twentieth year.—*Lancet*, July 5, 1873.

Progress in Medicine.

REPORT ON OTOLOGY.

By J. Orne Green, M.D.

Anatomy and Physiology.

(1.) Vulpian.—La corde du tympan, neuf moteur. Gazette Hebdom., No. 3, 1873.

(2.) Prevost.—Distribution de la corde du tympan. Académie des Sciences, Dec. 30, 1873.

(3.) Zuckerkandl.—Zur Entwickelung des äusseren Gehörorgans. Monatschrift für Ohrenheilkunde, 1873.

(4.) Boettcher.—Kritische Bemerkungen und neue Beiträge zur Literatur des Gehörlabyrinthes. Pp. 88.

(5.) Loewenberg.—Ueber die, nach Durchschneidung der Bogengänge des Ohrlabyrinthes, auftretende Bewegungstörungen. Centralblatt für med. Wissenschaften, No. 8, 1873.

(6.) Meyer.—On the Pointed Processes of the Auricle. British Medical Journal, March 22, 1873.

(7.) Urbantschitsch.—Ueber die membranösen und fadenförmigen Verbindungen in der Paukenhöhle.

(8.) Lucæ.—Ueber eine Erweiterung des Helmholtz'-schen Ohrmodells. Archiv für Ohrenheilkunde, vol. i. p. 1.

(1.) At the Paris Academy of Sciences, M. Vulpian gave the results of his inquiries into the changes of nerve fibres from division of the chorda tympani. He is satisfied that some fibres from the chorda tympani terminate in the submaxillary gland and some in the tongue. Those fibres to the tongue, he thinks, give the peculiar motor power which the lingual has after section of the hypoglossal. The lingual he regards as a sensory nerve, but is unable to explain why the fibres of the chorda tympani should only acquire a motor power after section of the hypoglossal.

Vulpian found that, after section of the hypoglossal, when the peripheral portion of the nerve was incapable of excitation, movements of the tongue could be caused by irritation of the lingual nerve. The same movements were caused by irritation of the chorda tympani; but, if the chorda tympani is cut some time before experimenting, all these movements of the tongue are absent. The previous results of Vulpian and Philipeaux now require experimental revision by section of the chorda tympani beforehand.

(2.) M. Prévost asserts that, in carnivora and rodents, section of the chorda tympani, in both ears, produces, in the course of six or eight days, degeneration of those terminal fibres of the lingual nerve which lie in the mucous and submucous tissue, but not of those in the papillæ. After division on only one side, the nerve fibres of the healthy side showed no degeneration. The chorda tympani was only affected at its lingual extremity, whereas the part remaining in communication with the facial was perfectly healthy. Destruction of the spheno-palatine ganglion or section of the Vidian nerve did not produce degeneration of the chorda tympani; and section of the glosso-pharyngeal nerve did not cause degeneration of the terminal fibres of the lingual.

(3.) The development of the external osseous meatus has been studied by Zuckerkandl. In the five months' fœtus, the tympanic ring has two osseous tubercles, and from these, after birth, the meatus developes in one of two ways; either by the growth outwards and sideways of these tubercles till they unite externally, enclosing an opening on the anterior aspect of the meatus, which gradually closes by the development of little bony ridges across it, or else by the growth of the tubercles outwards without this fusing together, so that a triangular opening is left on the external edge of the meatus, which is gradually closed by the approach of the two sides. Both of these forms of openings may persist till even the seventh year. Between the twentieth and thirtieth year, the meatus shows its most complete development, but after that age, by a retrograde process, it may be perforated again. Defects of the meatus from arrests of development, Zuckerkandl considers very rare; he found only two in examining a thousand skulls. The causes of the defects often seen, he thinks, are atrophy of the bone, pressure by the under jaw, and, rarely, persistence of the physiological openings (arrest of development).

(4.) In Böttcher's work, which is a critical review of the literature of the labyrinth, his experiments on the removal of the semicircular canals of frogs are of interest. All such previous operations have been done imperfectly, but he, before cutting through the canal, exposed it perfectly, so that he was sure that no other important parts were injured. In opposition to the results of Flourens and Goltz, no disturbance of equilibrium followed the operation of cutting through the semicircular canals, but was seen immediately after any of the deeper parts were injured. What particular parts were injured in producing this symptom he has not determined, but thinks that he can at least conclude that the semicircular canals belong to the ear and do not form a centre for the retention of the equilibrium of the whole body.

(5.) The object of Löwenberg's experiments was to determine whether the disturbances of movement which followed section of the semicircular canals were due to pain; whether the retention of consciousness was necessary for the production of these movements, and whether they were caused by an irritation or paralysis of nerves. The results of these experiments are given as follows:—

1. The disturbances of movement which follow section of the semicircular canals of the ear are the result of this injury, and not of a simultaneous injury of the brain.
2. The vomiting which was observed by Czermak is the result of a simultaneous injury of the cerebellum.
3. The disturbances of movement are the result of irritation, not of paralysis of the membranous canals.
4. The irritation of the canals produces *reflex* spasmodic movements without involving the consciousness.
5. The transmission of this reflex irritation from the nerves of the membranous canals to the motor nerves takes place through the thalamus.

Löwenberg also investigated Brown-Séquard's assertion that section of the nervus acusticus produces these same disturbances of movement, and found that, although it was true that in section of the auditory nerve from the tympanic cavity these movements were produced, yet dissection afterwards showed that, in every case, the semicircular canals were simultaneously either crushed or broken through.

(6.) Meyer, of Göttingen, asserts that the pointed processes which are occasionally seen on the edge of the helix of the ear in man, and which Darwin considers similar to the points of the ears of apes, therefore regarding them as an indication of a return to the ape-form, really do not consist of processes, but are caused by gaps existing on each side of the apparent process. He cites a case where the helix was wanting, but in its place were three knobs, which represented the rudimentary helix.

(7.) From his anatomical studies, Urbantschitsch agrees with most modern writers that the membranous and thread-like bands running across the tympanum are remnants of the tissue filling the cavity during fœtal life rather than pathological products. These bands connect (1) the long vertical process of the incus with the external wall of the tympanum; (2) the long process of the incus with the manubrium of the hammer; (3) the short process of the incus with the posterior wall of the tympanum; (4) the vertical process of the incus with the chorda tympani; (5) the external tympanic wall with the posterior cells of the mastoid; (6) the tensor tympani muscle with the upper wall of the tympanum. In regard to osteophytes, which Hyrtl had observed frequently in animals, Urbantschitsch found that they existed in the human tympanum between the eminentia pyramidalis, the oval and the round windows.

(8.) Prof. Lucæ has improved Helmholtz's model of the conducting apparatus of the ear by making an opening to represent the round window, and connecting the oval and round windows by a horse-shoe shaped glass tube, the two ends of which are covered with leather and can be placed in contact with the membranes of the windows, thus representing the labyrinth water. Into the upper part of this tube, he inserts another tube, likewise closed at the end with leather. The first tube being filled with water, the waves of sound are conducted through to the round window, and by attaching a König's flame to the upper end of the second tube, the vibrations of the labyrinth water can be demonstrated; or, by attaching an auscultation tube to this end, the vibrations can be heard. The apparatus, which was made for demonstrations to classes, is well adapted to demonstrate the vibration of and method of conduction to the labyrinth of the waves of sound, and also shows the importance of a delicate union of the labyrinth with the tympanic apparatus and the necessity of the tympanic apparatus having the power of free vibration.

Pathology and Therapeutics.

(1.) Wendt.—Polypöse Hypertrophie der Schleimhaut des Mittelohres. Archiv der Heilkunde, 1873.

(2.) Wendt.—Secundäre Veränderungen, besonders der Schleimhaut, im Mittelohr. Archiv der Heilkunde, 1873.

(3.) Wendt.—Ueber das Verhalten der Paukenhöhle beim Fœtus und beim Neugebornen. Archiv der Heilkunde, 1873.

(4.) Politzer.—Studien über Gefässveränderungen in der erkrankten Mittelohrauskleidung. Archiv für Ohrenheilk., vol. i. p. 1.

(5.) Gruber.—Die mehrfache Durchschneidung des Trommelfelles als Heilmittel gegen primäre order mit Trübung einhergehende übermässige Spannungs desselben. Wiener Med. Wochenschrift, January, 1873.

(6.) Gruber.—Ueber die Wahl der Einstichstelle am Trommelfelle bei der Durchschneidung der Sehne des Trommelfellspanners. Monatsschrift für Ohrenheilk., No. 4, 1873.

(7.) Buck.—Diseases of the Mastoid Process. Archives of Ophthalmology and Otology, vol. iii. No. 1.

(8.) Schwartze and Eyssel.—Ueber die künstliche Eröffnung des Warzenfortsatzes. Archiv für Ohrenheilk., No. 2, 1873.

(9.) Nussbaumer.—Ueber subjective Farbenempfindungen die durch objective Gehörempfindungen erzeugt werden. Wiener Med. Wochenschrift, Nos. 1, 2, 3, 1873.

(10.) Bezold.—Die Entstehung von Pilzbildung im Ohre. Monatsschrift für Ohrenheilk., No. 7, 1873.

(11.) Zanfal.—Casuistiche Beiträge zu den traumatischen Verletzungen des Trommelfelles. Archiv für Ohrenheilk., No. 2, 1873.

(12.) Lucæ.—Die Perlgeschwülst des Schläfebeines vom Klinische Standpunkte. Berliner Klinische Wochenschrift, No. 13, 1873.

(13.) Politzer.—Ueber die Anwendung des Trommelhohlencatheters. Wiener Med. Wochenschrift, Nos. 9–11, 1873.

(14.) Dalby.—Wound of Portiodura. British Medical Journal, January 11, 1873.

(15.) Hinton.—On Labyrinthine Vertigo, sometimes called Menière's Disease. Guy's Hospital Reports, vol. v., 1873.

(16.) Hughlings Jackson.—Cases illustrative of Cerebral Pathology. Med. Times and Gazette, March 1, 1873.

(17.) Farquharson.—Hæmatoma Auris. British Medical Journal, July 19, 1873.

(18.) Knapp.—A Method of operating for the Cleft Lobule of the Ear. Archives of Ophth. and Otol., vol. iii., No. 1.

(1.) Dr. Wendt continues his investigations on the pathology of the ear by the description of the microscopic appearances of the middle ear in a case of mucous catarrh of that cavity. In addition to clear, adhesive mucus in the tubes and tympana, with congestion and swelling of all parts of the mucous membrane lining the cavity, he also found numerous pedunculated (polypoid) growths on different parts of the membrane. These were variable in size, some visible to the naked eye, and many so microscopic as to be visible only with a power of 300.

The vessels of the tympanum and mastoid cells were distended, and showed in places, both fresh and old hæmorrhages; the swelling was chiefly in the sub-epithelial layer of the connective tissue, and lymph-like cells were visible between the fibrillæ. In some parts of this layer, cysts and cavities were seen, but the most interesting appearances were polypoid projections all over the surface of the mucous membrane, some attached by a broad base and some by a peduncle, which microscopic examination proved to be outgrowths from the sub-epithelial layer of the membrane.

The tympanic surface of the membrana tympani showed similar prominences. "In the course of the disease, a hypertrophic condition of the mucous membrane and membrana tympani, with the formation of polypoid projections had been developed—a polypoid hypertrophy." In 73 cases where there was a diffuse swelling of the mucous membrane in the tympanum, Wendt found this polypoid hypertrophy in 29.

(2.) The secondary changes in the mucous-periosteal covering of the tympanum which result from many diseases of the ear and are the common cause of permanent functional disturbances, are minutely described and figured by Wendt from a case of chronic purulent inflammation of the tympanum, with perforation, in a tubercular subject. Such a thorough examination of all parts of the membrane lining the tympanum has never before appeared, and the pathological changes may be taken as characteristic of a large number of similar cases. The patient was deaf, especially for the last two months, but conversation close to him was understood. The pathological changes were as follows :—On the membrana tympani, destruction of one part, with thickening and rigidity of the remainder; in the tympanum, thickening and rigidity of the mucous membrane throughout, especially in the niches of the labyrinth-windows and on the tympanal covering of the oval window; union of the walls with the membrana tympani and ossicula by recently formed membranes. On the ossicula, thickening and rigidity of their mucous covering, with adhesions between each other and the walls of the cavity and membrana tympani. The osseous portion of the Eustachian tube was much contracted by hypertrophy of the connective tissue of the mucosa; the mucous membrane of the cartilaginous portion was normal; the cartilage itself was calcified.

The microscopic examination of the membrana tympani showed calcification and ossification in the fibrous and external layer, with extensive ulceration of the surface; infiltration of round cells in the layer of mucous membrane, with here and there serous infiltration and the formation of cysts. That of the mucous membrane of the tympanum showed, in the sub-epithelial layer, simple hypertrophy of the connective tissue and the development of cystic cavities; in the periosteal layer, calcification throughout, including the covering of the membrane of the oval window and of the ossicula, and also ossification in some places and the development of osteoid tissue in others. In the new-formed membranous adhesions of the tympanum and mastoid, were found myxoma-like and fatty tissues, and in the cartilage around the base of the stump, was a circumscribed development of extra cartilage, the whole being covered with calcified mucous membrane.

These pathological changes, by involving the membrana tympani, the coverings and attachments of the ossicula and the lesser fenestræ, so interfered with the natural mobility of the conducting apparatus as to cause a great degree of deafness.

Wendt regards the deposition of lime-particles in the periosteal layer of the mucous membrane as the most frequent cause of extreme deafness; and the microscopic examination of the mucous membrane he considers absolutely necessary in order to determine the changes which have taken place, and hence would receive with doubt the assertions of strictly circumscribed calcifications and ossifications which have been made without the use of the microscope.

From his clinical experience, he considers it highly probable that the pathological processes described may be the result of any chronic disturbance of nutrition in the lining of the middle ear, whether in the form of serous, mucous or purulent catarrh, or of the so-called dry or hypertrophic catarrh.

(3.) In order to solve the question of the condition of the tympanum in the fœtus and new-born child, Wendt has carefully examined the ears of eighteen fœtuses and arrived at the following conclusions. In the fœtus which has never respired, the tympanum is filled up by its gelatinous, swollen mucous membrane; this cushion is the sub-epithelial layer of the lining of the tympanum, composed of mucous and gelatinous tissue. The disappearance of this mass results not from a destruction of the tissue or retrograde metamorphosis, but from a change of the gelatinous tissue into fibrous connective tissue; first the intercellular fluid diminishing and then the cell-elements retracting together during the first days of life, gradually forming the fibrous tissue. A marked diminution of the gelatinous tissue, with the consequent formation of a cavity, follows immediately on strong inspiration, whether this takes place in or ex utero. This cavity gradually enlarges as air enters the tympanum through the Eustachian tube and presses upon the cushion. The condition of the tympanum in the fœtus, Wendt considers of value in a medico-legal view, concluding that, wherever in a fœtus or new-born child the mucous membrane cushion of the tympanum is found perfect, an energetic inspiration, either intra-uterine or post-partum, cannot have taken place, and wherever this cushion is found diminished such an inspiration must have taken place.

[To be concluded.]

A Medical Black List.—An enterprising publisher in Philadelphia has provided the medical profession in that city with an *index expurgatorius*, the idea of which is very unique, and its object a very significant indication of the relations of the public and the Profession in that city and elsewhere. The publication, which is called the "Credit Guide," has just entered upon its second year of publication. It contains one hundred and forty-four pages, and its purpose is to publish semi-annually the names of persons who employ physicians without rendering them any remuneration for their services, though able (and in many instances abundantly so) to do so, and thus to furnish the physician with such information for the transaction of his business as is furnished by another form to the merchants of the country.

Under no circumstance is it intended to publish the name of any person in indigent circumstances, and who is consequently unable to pay.

Without doubt such a list would be a voluminous one, and must contain many revelations of meanness and avarice, but its object is impossible of attainment. To make it perfect it might contain an appendix, in which would be found the names of medical men who are in the habit of attending any or every comer whether solvent or not, if only to keep them from consulting a rival practitioner. We are profoundly cognizant of the fact, that eighty per cent. of the recipients of so-called medical charity are entirely undeserving of sympathy, and nearly as great a proportion of the money expended on them as charity, is misappropriated. But how can it be otherwise, when medical men who will gladly work without remuneration in any or every case are legion?—*Medical Press and Circular.*

Bibliographical Notices.

Critiques and Addresses. By T. H. Huxley, LL.D. New York: D. Appleton & Co. 1873. Pp. 317.

The papers collected in this volume have appeared at various times, and have all attracted more or less attention. There is but one among them which can be of interest to the medical profession at large, and we therefore will give our attention to that one alone, though it appeared originally more than three years ago. We refer to the address on Medical Education. Early in the address, the orator assured his hearers that the impression that he often found fault because he looked for too high a standard was a mistaken one; that the trouble was that he put his standard too low. He did not care for elaborate superstructures in education, but for a solid foundation, and he declared that the knowledge of physiology in particular, though not "scanty," was singularly "bookish and unreal." This criticism touches the most difficult point in the problem of advancing medical education. We conceive that there is much misunderstanding as to what this word "advancing" means; we hold that it does not imply the acquisition of a thousand and one refinements suited only to the scientist or specialist, and agree most heartily with Huxley that "any one who adds to medical education one iota or tittle beyond what is absolutely necessary is guilty of a very grave offence." Here, however, comes in the very important question what is "absolutely necessary?" which entails the further question, "what kind of men should the medical schools turn out?" If we are content to send forth men whose merits are purely negative, who have not been found disgracefully deficient in more than half of the required studies, who shall transmit unchanged to their children the routine practice which they have pursued without any shocking bad results, it is evident that a great deal is not "absolutely necessary." A great deal, however, is requisite if, as Huxley apparently desires, a graduate is to be thoroughly grounded in the elements of each branch. He speaks not only of physiology as being requisite, but of chemistry and physics as applied to it. He plainly does not mean by this that the student should be familiar with the fine results of such applications, but that he should know the elements of these auxiliary sciences very well, and that he should have acquired a power of drawing conclusions, so that he may be able to follow out any particular line of thought, and ultimately to practise by reason and not by routine. It is a play of words for Huxley to say after this that his standard is low, for what he takes from the medical course he puts into the preliminary one. He makes a good move in wishing to discard botany, geology and comparative anatomy from the regular course, in which, we believe, they hold a place in most English schools. He would also do away with materia medica, in which he does not include therapeutics, saying that students might as well be made to study cutlery because they are to use knives. The address should be read carefully by all who are interested in the subject; it is one of the author's happiest efforts; many sentences would serve as headings for deep disquisitions, as for instance: "What the student wants in a professor is a man who shall stand between him and the infinite diversity and variety of human knowledge, and who shall gather all that together and extract from it that which is capable of being assimilated by the mind."

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, OCTOBER 2, 1873.

AUGUSTE NELATON, whose career has lately come to a close in his 66th year, was one of the most distinguished French surgeons of his time, and, indeed, he may be said to have been quite at the head of his profession in Paris during the last twenty years. He was born in 1807, was a pupil of the illustrious Dupuytren, and took his degree in 1836. After a series of successes in competitive examinations, which resulted in his being appointed surgeon of the Paris hospitals and assistant professor of the Faculty of Medicine, he reached, in 1851, the culminating point of a French surgeon's ambition by being appointed professor of clinical surgery. He occupied this post with great distinction for seventeen years; resigning in 1867, he devoted the remainder of his life to a most extensive and lucrative practice as a consulting and operating surgeon.

He was already very honorably known in the profession, when he was brought into a blaze of public celebrity, attended by a great increase of practice, by his successful use of Charrière's porcelain tipped probe in the case of Garibaldi; he also won additional fame and the gratitude of his sovereign by his successful management of the case of the Prince Imperial. Besides receiving all the honors accessible to a member of the medical profession, he was created Senator by Napoleon III. in 1868; this high reward for his services to his profession and to his country was without precedent, and is worthy of notice as marking a progress in the degree of esteem with which the medical profession is regarded in Europe. During the last two years of his life, he suffered from organic disease of the heart, which was terminated by death on the 20th of September, ult.

His writings were not very numerous, and were all published during the earlier years of his career. His chief publications embraced the following subjects:—Tubercular Disease of the Bones (1836), Tumors of the Breast (1839), Operations for Cataract (1850). His most voluminous contribution to medical literature was his treatise on surgery (Eléments de Pathologie Chirurgicale, in five volumes, 1844–1860), which became one of the text-books of the French medical student; only the first three volumes were written by Nélaton, the last two being due to Jamain. A new edition, begun in 1866 by Jamain, and carried on by Dr. Péan, a pupil of Nélaton's, is at present in slow course of publication, but it can hardly be said to be brought up to the present standard of surgical theory and practice.

Nélaton's great reputation was not based so much on his literary contributions to science as on his clinical lessons and on his success as a practitioner. As a professor of clinical surgery, he was eminently successful; his wards were thronged with pupils, and his lecture room was always too small to contain the numbers of pupils of all nations who came to hear him. He was not what is called a brilliant man, as a speaker, or as an operator, but his simple, earnest manner, his careful judgment, his thorough diagnosis, and his patient and sure way of operating, were such as to deeply impress his audience, and to show them that the welfare of the patient and the teaching of sound, practical surgery were his objects, rather than any display of extraordinary eloquence or manual skill.

In his lectures, his originality was shown in connection with several important points in the theory and practice of surgery; among which may be mentioned retro-uterine hæmatocele, to which he first called attention in France; naso-pharyngeal polypus, to which he devoted several lessons, and for the cure of which singular and grave affection he devised several modes of treatment. He also gave his attention to lithotomy, and instituted the operation to which he gave the new name of "la taille prérectale," though it is in reality, as Sir Henry Thompson observes, hardly more than a carefully dissected bilateral operation. Nélaton's clinical lectures have not been published collectively in his own country, but an American translation was published in Philadelphia in 1855, by Dr. W. F. Atlee; the volume contains notes of lectures given in 1851, 1852 and 1853, and embraces a great variety of subjects.

With Nélaton has disappeared one of the last of a group of distinguished and successful practitioners who kept up the traditions of French surgery, as established by Dupuytren, Lisfranc, Boyer, Roux, Blandin and Chopart, and continued by Velpeau, Jobert de Lamballe, Malgaigne, Chassaignac and others of the same stamp. In his own country, among the younger members of the profession, his example and his teachings were most useful, and as a consulting surgeon he will be missed when the careful judgment of a wise and experienced practitioner is needed; but by the medical world at large his loss will now be little felt, for his scientific career may be said to have ended when he resigned his chair at the Faculty of Medicine, and with it the lead he was taking in French surgery.

We publish in this number the translation (kindly furnished by Miss Dimmock) of a letter from Prof. Frey, of Zurich, and one from Dr. J. R. Chadwick, both bearing on the recall by government of the Russian female medical students from Zurich. Prof. Frey complains that a brief mention which we made of the matter some time since contains an error and an injustice, because we implied that immorality was the cause of the recall. Wishing to do justice to all parties, and to obtain all possible light on the subject, we showed this letter to Dr. Chadwick, who had written from abroad a letter which was published in this JOURNAL on Feb. 6th ult. on this question, and asked him to give us the benefit of any information he might possess. Dr. Chadwick has complied with this request in so full and impartial a manner that further comment would be superfluous. We may remark, however, that the spectacle of girls taking part in socialistic meetings, which was one of the mildest charges against them, strikes us as very unpleasant to contemplate.

PATHOLOGY OF MUMPS.—*The Medical Times and Gazette,* June 21, 1873, states that M. Bouchut has addressed a brief communication to the Academy of Sciences on this subject. Regarded to the present time, he says, as a fluxion of unknown nature in children, or as an inflammation of the parotid gland in adults, mumps, according to his researches, really arise from a retention of saliva caused by a catarrhal inflammation of the parotid duct. Under the influence of this catarrh of the excretory canal, a temporary obstruction is caused, which retains the saliva. In children seized with this affection while in a good state of health, the disease is not a serious one, as suppuration does not take place. On the other hand, in subjects of septicæmia or "bacteræmia" mumps is a very grave affection, as suppuration always takes place, and death often results. There is only one way of averting this peril, which consists in making numerous small incisions in the substance of the parotid, before the pus, which is infiltrated into its substance, has time to collect together.

Correspondence.

UNIVERSITY OF ZURICH, Aug. 10, 1873.

MESSRS. EDITORS,—Your JOURNAL of July 10th gives the following statement:—

"We are sorry to hear that the female students at Zürich, of whom we have had such glowing accounts, are too immoral even for Russia, who has recalled her daughters to be redeemed by home influences."

This statement contains an error and an injustice; an error, inasmuch as it is not on account of immorality that the Russian government forbids attendance upon the lectures at Zürich, but on account of the revolutionary and socialistic tendencies of some of the female students.

These latter were in many cases too young to bear the change from the absolute form of government of their own country to the freedom of a republic without feeling the intoxication of liberty. In the eyes of the Russian government, it is a crime even to visit a political meeting.* Many of these Russian women have, however, by their great diligence and honorable conduct in social relations, won the most general esteem, and proved themselves worthy successors of the pioneers from England and America. The minds of the others were occupied more with political ideas than with the study of medicine.

The rules for matriculation of foreigners having been in some respects too liberal, some of the women who first studied here demanded, some years ago, a stricter examination for matriculation, and this in the interest of women themselves. This measure has now been adopted.

Of the immorality of the Russian students, no one in Zürich knows anything whatever, and the charge is an unjust and wicked pretence of the Russian government and of the numerous spies which it keeps here. . . . .

Only two Russian women have obtained here the degree of Doctor of Medicine, and these two are most honorable women. The others were called away by the decree of the Russian government before they could finish their course of study.

Hoping that I have said enough to prove this decree an injustice, I remain

Yours very respectfully, H. FREY,

Professor of Microscopical Anatomy and Embryology.

MESSRS. EDITORS,—Some months since, I wrote you from Zürich an account of the position taken by the University of that city with reference to the study of medicine by women. I described briefly the rise and progress of the movement which led to the admission of women to the general exercises of the University, and more especially to the medical lecture rooms and clinics. I gave utterance to no expression of personal feeling in the matter, yet the general tenor of my letter was favorable to the female students. This I could not have changed, even had I wished so to do, without having most unjustifiably manipulated and distorted the facts that came to my observation. The small cloud, which at that time was just discernible on the horizon, and to which I alluded when I stated that, "with the increase in quantity (of female medical students) there had been a depreciation in quality," has grown and spread until the whole sky is now overcast.

The immature and plastic minds of the young Russians, who have formed so great a majority† of the female medical students at the University of Zürich, have fallen a ready prey to the wiles and machinations of political adventurers, so that the steady and praiseworthy devotion to study which characterized the pioneers in that field has been supplanted by political agitation, and—what is worse—in some instances by an indulgence in the delusive fascinations of free love.

The *Pall Mall Gazette* is my authority for the statement that the Russian government has levelled a blow at the bechignoned heads of these medical students by announcing to "all the Russian women who attend the lectures at the University and Polytechnic School of Zürich, that such of them as shall continue to attend the above lectures after the first of January, 1874, will not be admitted, on their return to Russia, to any examination, educational establishment or appointment of any kind under the control of the government."

This action is attributed by the official organs to the "unfavorable reports that have reached the government relative to the conduct of these young women. . . . . A 'Slavonic Democrat-Socialist Society,' a 'Slavonic Central Revolutionary Committee,' and a Slavonic and Russian Section of the International Society have been formed at Zürich, and they number several of the young Russians of both sexes among their numbers. In the Russian library, to which certain editors send their periodicals and newspapers gratis, lectures of a very revolutionary character are delivered. It has become a daily occupation of young Russian girls to attend the meetings of workingmen; political agitation absorbs their youthful and inexperienced minds and leads them into wrong courses. The young women, who have thus been dragged into politics, are entirely under the influence of the leaders of the emigration, and have become their obedient instruments. Some of them go two or three times a year to Russia and back again, taking with them incendiary letters and proclamations. . . . . Others allow themselves to be deluded by the communistic theories of free love, and, under the protection of a fictitious marriage, act in utter forgetfulness of all the fundamental principles of morality and decorum."

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* The meetings of the International Society of working-people were regularly attended by some Russian students.

† The number of Russians was 108, and of those from other countries only 20 during the last semester.

The document published by the Russian government goes on to justify its action as follows:—"It must not be forgotten that these women will sooner or later come back to Russia, there to become wives, mothers and teachers; and it is the duty of the Russian government to prevent them, as far as possible, from corrupting the youth of the country. To those young women who really wish to obtain a scientific education, ample opportunities are offered by the higher schools of Russia itself, to which students of both sexes are admitted; but there can be no doubt that Russian young women, who go to Zürich, are actuated by different motives than a love of science."

These are the charges made against the Russian female students at Zürich by the government of their country, and the threats which follow are, undoubtedly, elicited solely by the political agitation to which the women have lent themselves, and by means of which their instigators were furthering their schemes.

It is unquestionably an error, as maintained by Prof. Frey in the letter which you showed me yesterday, to suppose that the Russian government was instigated to promulgate the decree above alluded to by solicitude for the morals and the social influence of its few absent daughters, but that there is some truth in the allegation I must believe, because rumors to the same effect were recounted to me during my visit to Zürich in the summer of 1872. Stories about "irregularities"—as New York brokers would express it—in the private life of these young ladies were circulating in Zürich among the younger members of our profession a year ago, though I can easily understand that they did not reach the ears of a person who occupies so eminent a position as Prof. Frey.*

That a change from the quiet home life of a Russian town or village to one of constant intercourse with young men in the study of subjects, where the attention must inevitably have been often directed to the physical and functional differences of the sexes, should have disturbed the moral equilibrium of a few among these girls is but natural, and, in this case, would seem not improbable, since their susceptibility to foreign influences is evinced by the easy and rapid conquest made of them by political agitators. All interested in watching the experiment, which has been tried in Zürich, will, however, give due weight to Prof Frey's denial of this accusation, and will believe that the charge of immorality is, to say the least, grossly exaggerated.

In this connection, I must avail myself of the opportunity of pointing out the great injustice done these women, who are struggling for medical educations, by establishing for them a different and much higher standard of excellence, both in studies and deportment, than for male students. Let it be remembered by those who are commenting upon the success and progress of any female student that she can only be fairly compared with the *average* male student. It seems to be expected that every woman, who has qualified herself to practise medicine, must make her mark in the world—be a success, as the term is—and if she falls short of this, her failure is made to reflect unduly upon the abstract question of the qualifications of women to become physicians. I would ask, in reply, how many of the hundreds of young men who obtain medical degrees in the course of a year are ever heard of again?

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* A correspondent of the *Cologne Gazette* asserts that upwards of one half of the Russian women students at Zürich live disreputably, and that many of the Swiss families in town have consequently refused to receive them in their houses.—*Medical Press and Circular*.

In morals, the same custom prevails, though here it is but an echo of the judgment pronounced by society throughout all ages.

The interference of the Russian government has driven all but two of its countrywomen from Zürich, while those from other lands remain, so that we may still look to that city for a solution of the vexed problem of "mixed classes," and trust that the prejudice against the question at issue may not be again excited owing to extraneous causes.

I am very truly yours, James R. Chadwick, M.D.

123 *Boylston St.*, *Sept.* 14, 1873.

Obituary.

Dr. Thomas Miller, of Washington, D. C., died suddenly at his residence in that city on Sept. 20th. He was the son of Major Miller, who came with his family to the District of Columbia during the administration of President Madison, and for years was attached to the Navy Department. He graduated from the University of Pennsylvania in 1829. Returning to Washington, he commenced the practice of his profession, in which he has always borne a prominent part. In his earlier days, he was a contributor to this Journal.

Prof. Dixi Crosby, M.D., LL.D., of Dartmouth College, Hanover, N. H., died on Friday, Sept. 26th, at the age of 73 years. Professor Crosby represented Hanover in the State Legislature, and was chosen State Railroad Commissioner in 1862. He was a Freemason and was a member of the Royal Arch Chapter at Harland, Vt. His surviving brothers are Dr. Josiah Crosby, of Manchester, N. H., Judge Nathan Crosby, of Lowell, and Professor Alpheus Crosby, of Salem. He leaves two sons, Dr. A. B. Crosby, a professor of surgery at Hanover and at the Medical College at Brooklyn, N. Y., and Dr. A. Crosby, a well-known physician in Concord, N. H.

At the regular monthly meeting of the Berkshire District Medical Society, held at Pittsfield, Sept. 24, 1873, the following resolutions were unanimously passed:—

Whereas, The Rev. John Todd, D.D., an honorary member of this Society, has been removed by death,

Resolved, That we bow with submission to the dealings of Him who doeth all things well, in whose hand our breath is, and whose are all our ways.

Resolved, That in the death of the Rev. Dr. Todd we recognize the loss of one whose associations with this Society were a source of intellectual improvement and high social enjoyment, and that his high office and good words will ever be held by us in grateful remembrance.

Resolved, That in his life of great labor in the pulpit, while battling with disease that would have crippled the energies of ordinary men, and in the great work which he accomplished by his writings, known over the civilized world, Dr. Todd deserved to be ranked among the most distinguished men of the present generation.

Resolved, That we tender his people and his family our deep sympathy in their great bereavement.

Resolved, That these resolutions be entered in the records of this Society, and that a copy be presented to his family, and published in the County papers, *Springfield Republican* and Boston Medical and Surgical Journal.

Medical Miscellany.

Endowment of a Medical College.—James Johnston, of Indianapolis, has endowed the Medical College of the Northwestern Christian University (Indiana) with half a million dollars, and a site for its location.—*The Clinic.*

The yellow fever continues severe at Shreveport ; up to Friday last there had been 440 deaths. The alarm had not subsided in Memphis, and the last reports state that the disease had shown itself in Alabama. Substantial aid has already been sent to the former place from the north, and more is needed.

Dr. Edward Wigglesworth has given his large collection of models of diseases of the skin and of syphilis, made by Baretta of Paris, to the medical school of Harvard University. The models are exquisite imitations of disease. This generous and very valuable gift furnishes the departments of dermatology and syphilis with additional means of illustration, such as no other school in the country possesses.

The collection has been placed in the museum at the medical college, where it may be seen by physicians.

A remarkable instance of devotion to science occurred in the case of Dr. Otto Obermeier, who died in Berlin, August 20th, from cholera. For several months he had been engaged in examinations of blood in typhus fever, and later, in researches on cholera. He was in the habit of keeping in his bed-room specimens taken from patients who died of cholera and also portions of their excreta. When aware of his condition he made several microscopic examinations of his own blood, although death followed in a few hours.

Treatment of Asthma.—Dr. Ad. d'Evot *(Rev. de Thérap.)* gives some directions as to the remedies to be used in asthma. Twelve grammes of flowers of sulphur, with one gramme of tartarized antimony, are mixed with honey and powdered gum, and divided into sixty pills. Three of these represent the dose of Debreyne's powders, and one pill is given morning and evening.

Morning and evening a sheet of nitre paper may be burned in the bedroom or alcove of the patient. The paper may be prepared of white filter paper, dipped in a solution of nitre in the proportion of a drachm to an ounce.—*The Doctor.*

Disinfectants.—In the *Zeitschrift des Oester.-Apothek.-Vereines*, February 10, 1873, Albert Eckstein published an account of his attempts to disinfect a privy which was used daily by one hundred persons, and the results are so interesting that they are here transcribed :—

1. Two pounds of sulphate of iron in solution. After from two to three hours all bad smell had disappeared, but in twelve hours all the influence of the disinfectant was lost,
2. Sulphate of copper in solution, the same.
3. Two pounds of sulphate of iron in crystals ; their effects lasted two days.
4. Sulphate of copper, the same.
5. Sulphurous acid in solution rapidly lost its effect, and was exceedingly irritating to the respiratory organs.
6. Two pounds of impure carbolic acid filled the house for two days with such a disagreeable smell that it was impossible to tell whether the original odor was destroyed or covered up.
7. Two pounds of sulphate of iron in a parchment sack exerted a disinfecting influence for three full days, and when the parchment sack was drawn up it contained only some dirty, odorless fluid.
8. Two pounds of the best chloride of calcium, in the parchment sack, disinfected the privy for, at least, nine days.

At the first meeting of the Society for Medical Observation, on Oct. 6th, Dr. J. G. Blake will read a paper on "Illustrations of Conservative Surgery."

A Move in the Right Direction.—At a meeting of the California Medical Society, the following resolution was introduced by Dr. Ira Oatman, of Sacremento :—

"*Resolved*, That it is the duty of, and we hereby recommend to, the Legislature of California to pass a law making it a misdemeanor for any person, for any purpose whatever, who is not a graduate of some institution of learning authorized by law to confer the degree of 'Doctor of Medicine,' who shall place before or after his or her name, in any manuscript, label, wrapper, card, hand-bill, circular, newspaper, pamphlet, magazine, book, or any advertisement, the word 'Doctor' or the abbreviation M.D. or Dr., or any others signifying directly or constructively that the person is a graduate of such an institution, or who shall authorize or sanction the same by others in his or her interests ; and that any person found guilty of such misdemeanor shall be punished by a fine of not less than ——— dollars, or imprisonment for not less than ——— years, or by both such fine and imprisonment."—*Western Lancet.*

The Suffolk District Medical Society opened the campaign on Saturday last with a very interesting meeting. Dr. Chadwick showed a curious pedunculated tumor, weighing four ounces, which he had removed from the outer surface of one of the labia majora of a woman fifty-four years old. Dr. C. D. Homans spoke briefly of two cases of strangulated hernia in which he had used the pneumatic aspirator. In one of two days' standing, he had met with perfect success ; in the other, no fluid was obtained, and the knife was resorted to with good results. He had also punctured the bladder above the pubes with the aspirator, in three cases of retention of urine, with most gratifying success. Dr. John P. Reynolds spoke of a statement he had seen of the advantage gained by puncturing the middle of the placenta, when apparently adherent, so as to admit air below it. This led to a somewhat extended discussion of physics of the placenta and uterus, followed by a more practical one on certain points in the management of labor. Several gentlemen dwelt upon the advantage of not hastening to complete the delivery after the birth of the head, and Dr. Reynolds spoke strongly of the absolute quiet and absence of friends, light, and even of the child, which should be enforced directly after delivery. Dr. Ayer reported a case of supposed mediastinal abscess breaking into the lung. After some incidental business, the society adjourned to the usual supper, having begun the season most auspiciously.

Mortality in Massachusetts.—*Deaths in sixteen Cities and Towns for the week ending September* 20, 1873.

Boston, 155—Charlestown, 12—Worcester, 26—Lowell, 25—Milford, 1—Cambridge, 28—Salem, 11—Lawrence, 24—Springfield, 10—Lynn, 18—Fitchburg, 4—Newburyport, 4—Somerville, 9—Fall River, 32—Haverhill, 5—Holyoke, 8. Total, 372.

Prevalent Diseases.—Cholera infantum, 68—consumption, 34—typhoid fever, 27—dysentery and diarrhœa 19—scarlet fever, 14.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, Sept. 27th, 151. Males, 82 ; females, 69. Accident, 6—apoplexy, 1—inflammation of the bowels, 2—bronchitis, 1—disease of the brain, 5—cyanosis, 1—cancer, 4—cerebro-spinal meningitis, 2—cholera infantum, 29—consumption, 23—convulsions, 2—croup, 1—debility, 1—diarrhœa, 5—dropsy, 1—dropsy of the brain, 4—dysentery, 3—diphtheria, 3—epilepsy, 1—scarlet fever, 5—typhoid fever, 12—bilious fever, 1—gangrene, 1—disease of the heart, 2—intemperance, 1—disease of the liver, 3—congestion of lungs, 1—inflammation of the lungs, 1—marasmus, 12—old age, 3—paralysis, 2—premature birth, 1—peritonitis, 1—puerperal disease, 3—suicide, 1—disease of the spine, 1—tabes mesenterica, 1—teething, 1—uterine cellulitis, 1—ulcer of the stomach, 1—unknown, 1.

Under 5 years of age, 78—between 5 and 20 years, 12—between 20 and 40 years, 36—between 40 and 60 years, 16—over 60 years, 9. Born in the United States, 114—Ireland, 25—other places, 12.

THE

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Original Communications.

REST.

By Irenæus P. Davis, M.D., Lenox.

Read before the Berkshire District Medical Society, May 28th, 1873.

Rest is re-creation; that is, reproduction of power, to be stored up in the tissues as in reservoirs. Examples of reserved forces, throughout the animal economy and even in the vegetable world, seem to indicate a complete system of stored power, to be reproduced as fast as consumed, and the supply, so long as the conditions of health are observed, to be in exact ratio to the demand.

Weariness is a sensation of power lost. It differs from simple weakness, which is a want of power. Therefore weakness is an element of weariness, the latter never existing without the former, while the former may exist without the latter. Common parlance recognizes this difference. We speak of weariness as a feeling of being worn out. This is literally correct. In a normal condition of the system, the processes of assimilation and disassimilation are perfectly antagonized, the one by the other. These processes are necessary to the vitality of the tissues. Life is a continual death, a continual wasting of material, and the supply must be maintained, otherwise life ceases as a fire ceases to burn when the fuel is exhausted. Life is action, therefore an unusual degree of activity involves an intense form of life, an extraordinary destruction of tissue. This destroys the balance between assimilation and disassimilation, and, so long as this action continues, the two operations will be disproportionate, reproduction not keeping pace with the waste. An organ in constant exercise is thus actually wearing out. It is true that the demand, in a measure, regulates the supply, that the greater the consumption the greater is the production of new material. Here we find the law of compensation illustrated. But this change requires time, and, meanwhile, destruction is going on in greater ratio than reparation; moreover, as the supply is increased, the action becomes more intense, consequently consumption is ever in advance of production; hence we experience weariness, the sensory nerves convey intelligence of the exhausted condition of organs that have been long in action, and warn us to give them time to recuperate. If we cannot or do not heed the intimation, the destructive process goes on till the organs are no longer capable of performing their functions, and, perhaps, till the power of assimilation is forever lost.

Were the waste and repair of tissue always equal during activity of organs, their action might be continued indefinitely; and this is indeed true of some. The operations performed by the organs concerned in circulation and respiration and some of the organs of secretion and excretion, with the nerves controlling them, are frequently cited as instances of continual action; but the heart, perhaps most often referred to as illustrative of this condition, does not act without intermission, and the same is doubtless true of most of the other organs mentioned. The intermission is brief, but so is the action, and the relation of waste to repair is so adjusted that the brief period of rest is just sufficient to preserve the equilibrium between the two processes. Probably the best example in life, of incessant activity, is afforded by the nerves of hearing. For them, labor is the normal condition, and in them the opposing forces of assimilation and disassimilation are so perfectly balanced that in a state of health they require no rest. Even in sleep, the nerves of hearing remain on the alert, taking cognizance of every sound, and discriminating one sound from another with as unerring accuracy as during waking hours. That this is a fact is beyond doubt. Although, during profound sleep, the mind is unconscious of sounds, yet it must be that they are appreciated by the organs of hearing, for sound is a common means of rousing persons from sleep. Now, in order to dissipate sleep, it is necessary that some cause shall operate, the effect of which will be appreciated *during the continuance of sleep;* and, as the impression of sound is received only through the medium of the auditory nerves, did they cease to exercise their power during sleep, no sound, however loud, could possibly wake a sleeper. Again, we find that persons, having fallen asleep in the midst of continuous noise, always wake on the sudden cessation of the sound; showing that not only are sounds occasionally heard in sleep, but they are always observed when present. We also observe that the mother wakes at the first cry of the child, and the physician at the ringing of the office bell, while the same persons, in many instances, sleep uninterruptedly through the severest thunder storms; and those who are acquainted with the business of telegraphing say that in offices where a dozen machines are in use, each with a separate attendant, it is common for a night operator to sleep until his own machine calls, when he instantly springs forward to receive the message; though he may be until that moment sleeping soundly and on the opposite side of the room, and though half of the machines in the room be ticking at the same time and almost constantly changing, some stopping and others commencing, while all are so nearly alike in sound that a stranger has difficulty to distinguish one from another even while awake. Therefore we know that the nerves of hearing distinguish accurately, during sleep, between different sounds. It follows, then, that persons, living in the neighborhood of waterfalls or other sources of incessant sound, can have no rest for the organs of hearing. Nor is such rest necessary. As has been before remarked, the arrangement is such that the action of hearing can go indefinitely without fatigue. The sense of hearing is beyond our control. So long as sound is present we must receive it. Even the action of the heart is less removed from the influence of volition than that of the organs of hearing, while the operations of digestion are in a much greater degree controlled by the will; and, other things being equal, just in proportion to the susceptibility of voluntary control is the amount of rest required. This law seems to be universal in its application to the human system, and its utility is at once apparent. The voluntary muscles, being more under the control of the will than any other parts, require and receive a greater amount of rest than any other organs.

All actions are duplex, involving two powers; the power of originating an impulse, and the power of responding to that impulse. Thus, in the action of a muscle, the impulse must originate in a nerve centre, and the muscle, in obedience to that impulse communicated by the nerve, contracts. We have, then, two organs, entirely distinct, concerned in a single action; and, supposing these organs to be equally under the control of the will, they must be affected in the same degree by a continuance of the action. All voluntary movements originating in cerebral nerve-centres wholly subject to volition, brain and muscle suffer equally from their excess. In reflex movements, the motor impulse is developed in a spinal center, over which the will has no influence, and is thence conveyed to the muscles in the same manner as in the former case; but the spinal nerve centres, being in their action independent of volition, work without impairing their power to labor, and therefore their force is constantly generated so long as the peculiar irritation is continued which calls their function into exercise. On the other hand, the muscles are affected in the same manner as if their action originated in the brain; for the conservative provision, by which organs not subject to voluntary control are capable of unremitting activity, has no bearing on the action of voluntary muscles, even when such action is in its origin separated from the operation of the will. The object of the said provision is, evidently, to secure the equilibrium of vitality to those organs that, in their ordinary operation, are incapable of securing it through the medium of the will. The law is, therefore, a fixed one, in its relations to the various organs, being rather associated with the mode of action than dependent upon it. Moreover, the action of a voluntary muscle, in itself considered, is always the same except in intensity, whatever the exciting cause. A muscle is capable of contracting, in response to an impulse received from one of three sources; from the centre of intelligent nerve power, from the centre of unintelligent or reflex nerve power, and from electricity, which has been shown to be entirely distinct from nerve power; and, from whichever of these sources the impulse is received, it is responded to in the same manner, and with precisely similar results to the muscle, the degree of the action and of the results being regulated by the strength of the impulse and the capacity of the muscle for receiving impulses. In continued reflex action, then, the muscles suffer exactly as in the same degree of voluntary action, while the spinal nerve-centres remain uninjured. Therefore, so long as irritation provocative of reflex action is present, and the muscles have not undergone degenerative change sufficient to destroy their function, the nerves impel them to the exercise of that function. On this account, greater exhaustion is frequently produced by reflex than by voluntary motion.

The manifestations of the exhausted condition consequent on neglect of rest are somewhat varied. When the exhaustion is slight, a sensation of weariness, with temporarily diminished power, are the immediate results, while the law of supply and demand, before noted, provides that, if action be now suspended for a time, nutrition is increased and the power for subsequent action is intensified. When exhaustion is complete, loss of power and atrophy of course result. If exhaustion, being very great, is yet not entire, a disordered and convulsive action ensues, seemingly the final effort of life for mastery: for it is a universal law of animated nature, that, as death approaches, the vital energies are concentrated in one mighty effort for the continuance of life. Instances of the operation of this law are seen among vegetables. The dying tree puts forth unseasonable blossoms, or gives other indications of that struggle without which life is not yielded. The peculiar relation of one organ to another, known as sympathy, and supposed to depend on some sort of nervous connection, has, although its operation is not understood, certain well marked and definite results. For example, traumatic inflammation occurs in one eye, and, without contagion, without direct injury, without any known cause, the other eye becomes inflamed also, and we say the extension of the disease is sympathetic; or, one organ being diseased, sympathetic pain is felt in another organ, entirely distinct and to all appearance healthy. A similar phenomenon often occurs after undue action of one part. Other parts, not concerned in the action, sympathize in the exhaustion following it, and require rest. That this sympathetic exhaustion is not dependent on contiguity of parts is proved by the fact that it occurs in those that are remote from the seat of action, as when a fatiguing walk is followed by neuralgic pain in the face; and that it is not due to the general drain on the system caused by the wearing out of a part, by the fact that a very great degree of sympathetic exhaustion frequently follows the exercise of a very small organ, as, for example, the eye.

Rest may be absolute or relative. Absolute rest consists in a cessation from labor. Relative rest is a change of labor, the change being not in degree, but in kind. Examples of the former are afforded by voluntary muscles, nerves, and all organs requiring rest, whose office is to perform a single act. Examples of the latter mode of rest are furnished by the brain, which is capable of performing actions differing in their nature. The muscle simply contracts, the nerve conveys impressions only, while the brain receives impressions, converts them into impulses, originates ideas, forms the ideas into thoughts, clothes the thoughts with language, and gives expression to the language. All of these are different forms of labor, the capacity for each depending on a reserve power distinct from the power which limits each of the others. Therefore, one action of the brain being suspended, the reserve power by which it is maintained may be reproduced even while another action of the same organ is going on. Thus the brain receives rest relative to one mode of labor even while it continues to labor in another direction. But this change of labor is not sufficient to maintain the equilibrium of health, and therefore the brain receives also a certain amount of absolute rest. The condition of sleep is to the mind what relaxation is to the muscles, simple inaction. During sleep the intelligent faculties cease to operate, though the organs of sense retain their power to receive impressions, and reflex action continues; so that, though external impressions are constantly being received, no intelligent action is taken thereon. Too little sleep produces in the brain the same results that follow excessive action in other organs, viz., exhaustion, irritability, and disordered action. On the other hand, too much sleep produces the legitimate effect of long-continued inaction, inertia. Inaction ceases to be rest when it passes beyond the point necessary for recuperation. After this point is reached, if the force generated is not consumed, the vascularity of the neglected organ soon becomes permanently diminished, nutrition is impaired, and atrophy ensues.

The relation of rest to disease is exceedingly interesting, and vitally important, but time forbids more than an allusion to it on the present occasion. As a curative measure, rest is of the greatest consequence in the management of all inflammatory diseases and of nearly all others. In importance, and in universal application, it stands far ahead of all other therapeutic agents. "If he sleep, he shall do well," is a maxim which has received the sanction of all schools of medicine, in all ages, and in every land.

THE Medical International Congress of Vienna took place from the 2nd to the 10th of Sept. The most liberal arrangements were made as regarded foreign visitors. There were six principal questions to be discussed. (1) Vaccination; (2) syphilis and prostitution; (3) cholera and quarantines; (4) a universal pharmacopœia; (5) freedom of practice in all countries for qualified men; (6) hygiene of large towns.

Progress in Medicine.

REPORT ON OTOLOGY.

By J. ORNE GREEN, M.D.

[Concluded from p. 339.]

(4.) POLITZER has studied the pathological changes in the vessels of the tympanum in cases of chronic purulent inflammation with perforation, and finds that the arteries are few in number and not enlarged, but the veins are seen in large numbers, some enlarged to many times their natural size, and occasional bulgings. From the large number of these veins, which often form a thick network, he concludes that new vessels are formed during the disease. He also demonstrates not only the existence of lymph-vessels in the tympanic mucous membrane, but found these vessels enlarged into irregular cavities, with sharp outlines, and lined with epithelium, normal in some places, and in others filled with molecules and fat globules.

(5.) Gruber, considering that abnormal tension of the membrana tympani may be the cause of disturbances of hearing, not only in itself but also in its action on the position of the ossicula, proposes to relieve this by making several incisions through the membrane, and, by after-treatment, to prevent the membrane from again recovering its great tension. The operation is proposed in those cases in which the tension cannot be relieved by the air-douche, or in which the air-douche is liable to produce relaxation of portions of the membrane. For the diagnosis of abnormal tension, he depends on the curvature of the membrane, which can be decided from the folds of the membrane and from the position of the manubrium. Siegle's speculum he finds of value in establishing the degree of tension, and also the auscultatory sounds with the air-douche. The portions of the membrane to be incised, and the length of the incisions, are not given, apparently because he considers these points matters of indifference; the number of the incisions is generally from two to four. The operation is not very painful, the inflammatory reaction slight, and the results he praises highly. The clinical histories of several cases, which were very much benefited by the operation, are given.

(6.) Gruber has examined the course of the tensor tympani muscle on a large number of preparations, in its relation to the operation of tenotomy, and finds that the end of the osseous canal, from which the muscle passes out into the tympanum, varies somewhat in its position, but generally lies behind the line of the manubrium; "in the majority of temporal bones examined, the semicanal of the tensor tympani ended nearly at the middle of the upper edge of the oval window; in some cases at the posterior edge of the window, and only in a few cases in front of the middle of the window." From this it is evident that, in order to reach the hammer, "the tendon must pass in a downward, forward and outward direction." The position of the manubrium, he considers, will indicate the course of the muscle, and decide on the best point to perforate the membrana tympani for tenotomy. If the manubrium is drawn directly inwards, the course of the muscle is inwards; if the manubrium is drawn both backwards and inwards, the course of the muscle must be somewhat backwards. A general rule for the point of election in perforating the membrane for tenotomy, he thinks, cannot be given, but a decision must be reached in each individual case from the appearances and condition of the membrana tympani and of the manubrium.

(7.) Dr. Buck, in an exhaustive and thoroughly practical article, divides the diseases of the mastoid process into five varieties:—(1) inflammation of the external periosteum; (2) simple congestion of the mucous membrane; (3) congestion and filling up of the cells with a reddish, pulpy material; (4) chronic subacute inflammation of the mucous membrane, with sclerosis or hyperostosis; (5) caries, with accumulation of pus, within the mastoid process, the second, third and fifth varieties being different stages of an acute inflammation.

The first variety consists of an inflammation of the external periosteum only, the result of an inflammation of the meatus, which extends, *ex contiguo*, backwards; it may go on to the formation of a subacute cellular abscess. The treatment should be directed to the meatus as the original disease, unless pus has actually formed, when it should be evacuated by incision. The small gland lying over the mastoid may become inflamed, and this should be distinguished from the inflammation of the periosteum proper.

The second variety is often seen in acute inflammation of the middle ear, and is characterized by pain behind the ear, tenderness on pressure over the mastoid, and occasionally by slight swelling. Active local bleeding, either by leeches, or, if these are not sufficient, by free incision through the periosteum, will generally relieve permanently.

The fourth variety, sclerosis or hyperostosis, is the result of long-continued inflammation of the mucous lining of the cells; its progress is insidious, its symptoms slight, if any, and its diagnosis impossible.

The third and fifth varieties can, with difficulty, be distinguished from each other, it being often impossible to decide when the former has passed into the latter; both endanger the life of the patient. The probable change from one form to the other is thus described by Buck: "the intercellular passages being closed, and the cells themselves filled with the swollen and congested mucous membrane, stasis follows in the local circulation, the bone becomes deprived of its nourishment, and the soft parts filling, the cells break down into pus. The bony septa then either become dissolved, forming granular detritus, or separate as a connected whole from the surrounding healthy bone." The disease may terminate either in death from basilar meningitis, abscess of the brain, embolus and pyæmia, or exhaustion, or else in recovery after the extrusion of the carious bone. Pain and tenderness on pressure are almost always present, and the following aids to diagnosis are given by Dr. Buck. Prolapse of the posterior and superior wall of the meatus is occasionally seen, associated with caries; brain symptoms may occur in inflammation, with or without pus, or may be absent, with extensive caries; facial paralysis occasionally occurs, from the bony walls of the tympanum, in which the nerve lies, being involved; cessation or diminution of the purulent otorrhœa usually precedes acute mastoid inflammation; occasionally, the membrana tympani remains entire; pus through the Eustachian tube indicates some obstruction to its escape from the meatus; granulations on the upper or posterior wall of the meatus would lead us to suspect an opening into the mastoid cells at that point.

When local depletion and incision through the periosteum are insufficient to relieve the pain and tenderness, the cells should be exposed by perforating the bone. Out of thirty-one cases tabulated by Dr. Buck, in which the operation was performed, the disease was arrested in twenty-three, and of the remaining eight fatal cases, death could not be attributed, either directly or indirectly, to the operation, except in one case; in the remaining seven cases, pyæmia or inflammation of the brain had already developed itself before the operation. The operation should be performed as follows:—after exposing the bone, its condition should be examined, and, if roughened or softened, it should be perforated with a director; if pus is found beneath the periosteum, a sinus should be sought, and, if found, enlarged; if no natural opening is seen, the bone should be perforated inwards, forwards and upwards from a point a quarter of an inch distant from the meatus, and a little below the level of its upper wall, till the mastoid cells are reached; the long septa should then be broken down with a director. The only caution in the operation is not to wound the lateral sinus. The after-treatment consists of keeping the wound open by tents, poultices and dressing.

The article closes with a tabulated statement of thirty-five operations, from various authors.

(8.) The artificial perforation of the mastoid process is discussed, historically and clinically, by Schwartze and Eyssel, and their investigations of the anatomy of the mastoid cells are of interest, as they have succeeded in describing the relations of that very irregular cavity.

At the level of the hammer-anvil axis, the posterior wall of the tympanum bends backward at a right angle, and forms the floor of the antrum mastoideum; just below this floor, lie the external semicircular canal, the facial nerve and the stapedius muscle. The upper wall of the tympanum passes directly backwards, and forms the upper wall of the mastoid. The anterior part of the antrum, next the tympanum, forms a triangular cavity. Two millimetres behind the insertion of the short process of the anvil, the passage from the antrum begins to enlarge downwards and outwards, forming a cavity about nine millimetres high, twelve long and five deep. This cavity lies forwards, upwards and inwards from the rest of the mastoid cells, and is bounded on its upper, lower, inner and posterior sides by the petrous bone, and on its outer side by the squamous bone. From this cavity as a centre, the mastoid cells branch out in the form of a fan, but, from the absorption of their partition walls, often become irregular. The cells in the petrous bone are the largest; those in the squamous bone, over the meatus, the smallest. Occasionally, the occipital bone takes part in the formation of the cells.

The second part of their paper is occupied with a discussion of the different modes of operation, and the authors prefer to open the bone with the chisel rather than with a borer trephine; in other respects, this section offers nothing new. Finally, a table of fifty-nine cases, from different authors, is given.

(9.) A startling series of observations, made on himself for a number of years, are described by Nussbaumer, in which he attacks the physiological axiom that each organ of sense is capable of peculiar perceptions which can be excited by no one of the other organs of sense.

The author himself, and his older brother, both have this peculiarity, that every perception of sound, either music or noises, excites also a perception of light. His ear is so delicate, that with the deep notes of a piano he is able to hear eleven over-tones, and with each one of these has a distinct perception of light. As children, he and his brother were in the habit of designating frequently the tones of different objects when struck, not by the sound, but by the color produced. To learn whether the perceptions of the two brothers were always the same, a long series of questions to be answered by each were written, from which it seemed that, although each had a perception of light with each sound tried, yet the color of the light varied, being, for instance, for the note A, in one dark-prussian blue and in the other dark yellow.

The color was never seen externally, but, as he expressed it, his brain suffered from the action of a sound-wave in the meatus, not only the normal, but also such a change as produced in his consciousness an impression of color. When in concentrated thought, however, the perception of color might escape notice.

In the discussion which followed, Prof. Benedict considered that the phenomena were not physiological but pathological. Optical perceptions as the direct result of acoustical perceptions could only be pathological; similar obscure diseases of the mind and brain were frequently observed in hysterical, hypochondriacal and melancholy persons, but were not understood, as most physicians were unskilled in psychology. He predicted that similar observations to those of Nussbaumer would soon be reported, now that attention had been called to them. Finally, Prof. Benedict warned the patient against farther observations on himself, lest the phenomena should overpower him, especially as it was evident that there was an hereditary tendency; possibly, heterotopia was the cause of the phenomenon.

(10.) Bezold, with the history of ten cases of the disease, adds his contribution to the pathology of parasitic growths in the ear. In all of his cases, the presence of the vegetable parasite had been preceded by the instillation of oil into the external meatus, which, in his opinion, furnished a favorable soil for the development of the plant; but the presence of the growth he considers a specific parasitic disease, and not an accidental circumstance, for having once formed on foreign masses, such as cerumen, dead epithelium or oil, it may invade the healthy epidermis of the meatus or membrana tympani. The latter part of his paper is taken up with a description of the various species of vegetable parasites which have been discovered by the authors whose experiments he accepts as conclusive, although none have yet been given in which the spores in the atmosphere have been so perfectly excluded as to allow only the development of the parasite originally planted.

(11.) Zaufal adds to the little which has been written on injuries of the ear the histories of six cases observed by himself: viz., hæmorrhage between the layers of the membrana tympani, with consecutive meningitis, the result of a fall into the water; rupture of the membrana tympani from the same cause, with the same result; hæmorrhage between the layers of the membrana tympani, the result of a cannon explosion; hæmorrhage in the right membrana tympani, the result of a fall from a wagon on to the pavement; rupture of the right membrana tympani, which was already atrophied from disease, the result of a blow on the ear with the fist; rupture of a cicatrix in the left membrana tympani from a blow with the fist.

(12.) Lucæ reports ten cases of what he calls instances of pearl-tumors, in order to call attention to the serious nature of the disease, and also to the seat of the tumors, which, he asserts, is in the tympanum. He distinguishes the masses found in his cases from the epidermal masses resulting from a simple purulent otitis, and only applies the term pearl-tumor to lamellæ of large cells, without nuclei, which have formed considerable masses resembling beans, peas, or acorns. In all of his cases, chronic otorrhœa had existed for years, the membrana tympani was perforated, portions of the bone were destroyed, and the pathological masses were removed by syringing from within the tympanum. No evidence is, however, brought forward to show that the epidermal masses were the cause of the destruction of the bone, and in the discussion which followed the reading of Lucæ's paper, both Langenbeck and Waldeck considered that the masses in question were rather the result of the long-continued inflammation and caries than the cause of it.

(13.) Politzer, in a long article, in which he discusses the various methods of removing exudations from the tympanum by the air-douche and paracentesis, also gives his conclusions on the value of the tympanic catheter, first introduced by Weber-Liel. In the secretory affections of the tympanum, with swelling of the Eustachian tube, he found the catheter useful for injecting astringent and alkaline solutions, but the results were no better than those obtained from the same injections through the Eustachian catheter; in the most insidious affections, the results from the tympanic catheter were not favorable. Only in the rare cases in which the Eustachian tube was very much swollen, was he able to gain by the tympanic catheter what he was unable to do by the air-douche or Eustachian catheter.

(14.) Dalby reports the case of a young child, who thrust a pair of sharp-pointed scissors into the left ear, perforating the membrana tympani; the injury was followed immediately by complete facial paralysis of that side, which still remained the same, three months afterwards. The facial nerve was evidently severed in the Fallopian canal, where this passage passes through the tympanum.

(15.) From an analysis of eight cases observed by himself, Hinton concludes that Meniére's theory of the disease which bears his name is very doubtful, the symptoms pointing more frequently to a real cerebral rather than to a labyrinthine affection.

(16.) From the analysis of a large number of cases of cerebral disease, Dr. Hughlings Jackson expresses the opinion that deafness never results in any way, from any kind of disease, in any part of either cerebral hemisphere.

(17.) To the clinical history of hæmatoma auris, Dr. Farquharson contributes several cases which occurred in boys, from blows received on the ears while playing football, and also refers to two cases in prize-fighters.

(18.) In order to correct the little notch which is left in the lower border of the lobule after the operation for cleft lobule, Knapp adapts the Meriault-Langenbeck operation for hare-lip to the ear, and makes a little flap on one side of the cleft, which is carried over and attached on the lower border of the opposite side by a suture.

Bibliographical Notices.

Fractures of the Elbow-joint. An Essay to which was awarded the Second Prize of the Boylston Medical Society for 1873. By Walter Ela. Cambridge: Welch, Bigelow & Co., University Press. 1873. Pp. 57.

The Boylston Medical Society, as is well known by graduates of the Harvard Medical School, is composed entirely of medical students, who elect their president annually from the ranks of the profession. The Society has always been popular among the students, and during the many years of its existence, for it is quite a venerable society, it has succeeded in enrolling among its members only those students who were earnest in their work. It has served a useful purpose, like the popular clinical conferences, in encouraging original contributions and debate among the students themselves. Two prizes are usually awarded annually for essays on any medical subject, and the standard of these has testified favorably to the character of the students and the excellence of the instructions which they have enjoyed. It was a noticeable fact, however, that the number and high standard of these essays offered this year exceeded in a marked degree those of former years. As evidence of this, we have but to call attention to the elegant little volume of Mr. Ela.

Fractures of the elbow-joint are, perhaps, among the most dangerous of surgical injuries—to the ignorant practitioner—an apparently slight injury being followed by a condition which seriously impairs the usefulness of an important member, perhaps to the surprise of physician as well as patient. It is but too frequently by dearly bought experience that the practitioner learns to appreciate the difficulties attending the treatment of this injury. Mr. Ela, in his essay, after some prefatory remarks on the anatomy and development of the elbow-joint, describes accurately and clearly the various forms of fracture to which it is liable; where necessary, his remarks are illustrated by diagrams and drawings made by Dr. H. P. Quincy, whose reputation as an artist is rapidly becoming well known. The simplicity, but the importance of the treatment now adopted by our best Boston surgeons for this injury has received due attention, and the essay closes with an account of the dissection of an elbow-joint which had sustained, among other injuries, that of impacted fracture of the neck of the radius. The case is handsomely illustrated. We cannot close our notice of this brochure without complimenting Mr. Ela on the excellent character of his work. We do not remember to have seen a better description of these injuries, and we recommend it as a valuable addition to any physician's library.

Handbook of Physiology. By Wm. S. Kirkes. Edited by G. W. Morant Baker. A new American from the eighth English Edition. Philadelphia: Henry C. Lea. 1873. Pp. 656.

As the English edition has been reviewed in the Journal of April 10th ult., we need now merely mention the form of the American one. This is very briefly done; the paper, type, cuts and binding are all very good.

Handbook for the Physiological Laboratory. By E. Klein, M.D., J. Burdon-Sanderson, M.D., F.R.S., Michael Foster, M.A., M.D., F.R.S., and T. Lander Brunton, M.D., D.Sc. London: J. & A. Churchill, and Philadelphia: Lindsay & Blakiston. 1873. Pp. 583. Plates cxxiii. Two volumes, large 8vo.

This work supplies a want which has long been felt by all readers of physiology. Recognizing the fact that physiology is emphatically an experimental science, it furnishes minute instructions for performing a great variety of experiments illustrating all the most improved methods of physiological investigation. The directions are given so much in detail that in many cases the student may dispense with the assistance of an instructor, but here, as in all investigations involving delicate manipulation, the most minute written instructions can never take the place of experience. It may, perhaps, be feared that a work of this sort will be likely to encourage indiscriminate vivisection, and to lead to an amount of suffering out of proportion to the advantages obtained. The writers, however, seem to have had this danger in view, and have given careful directions for administering anæsthetics and narcotics. Certain classes of experiments are omitted, for the avowed reason that they do not succeed on narcotized animals.

By dividing the work to be done, amongst four investigators of acknowledged experience in their own departments, a degree of excellence has been obtained impossible by any other method. The work is distributed as follows:—

I. Histology, by Dr. Klein.

II. Blood, Circulation, Respiration and Animal Heat, by Dr. Burdon-Sanderson.

III. Muscles and Nerves, by Dr. Foster.

IV. Digestion and Secretion, by Dr. Brunton.

The plates, 123 in number, form a volume by themselves. The inconvenience which necessarily results from thus separating the plates from the text, is greatly increased by the confused arrangement of the figures. For instance, the figures of the first six plates occur in the following order: 1, 12, 2, 13, 16, 3, 4, 14, 5, 6, 17, 11, 20, 21, 18, 19, 22, 23, 24, 25, 7. Fig. 8 is on the 17th, and Fig. 9 on the 37th plate. Such confusion must, of course, cause the reader great waste of time. The execution of the plates, however, leaves nothing to be desired. Those illustrating the histological portion of the work are models of clearness and beauty. Particularly worthy of attention are those figures which show the distribution of the non-medullated nerve fibres, as revealed by the chloride of gold process, and those showing the relation of the lymph-spaces to the lymphatic vessels on various parts of the body.

In this portion of the work, the writer gives all the most approved methods for preparing the various animal tissues for microscopical examination, and describes and figures the latest results of histological investigation. A student of histology could scarcely desire a better guide. It would have been an improvement, however, if the enlargement of the figures had been expressed in diameters, instead of indicated by reference to the objective and eye-piece used, for a beginner derives very little information from "Oc. 4; Obj. 7," especially if he does not happen to be the fortunate possessor of Hartnack's objectives.

In the second portion of the work, Dr. Sanderson describes a number of simple experiments designed to illustrate the chemical and optical properties of the blood, and gives careful directions for analyzing the gases of that fluid. Following these, is a chapter on the circulation of the blood, containing a description of many of those important experiments which have thrown so much light on the functions of the nervous system in regulating the movements of the heart, and the resistance offered by the arteries to the flow of blood. In a department of physiology where so many questions are still under discussion, it is difficult to avoid confusing experiments with the inferences to be drawn from them. Though, as a rule, this distinction has been carefully maintained, yet there are one or two cases (e. g., in the section on the influence of the respiration on the circulation) where the experiments seem to admit a different interpretation from that given by the author. The chapter on respiration contains rules for the determination of the amount of carbonic acid excreted in a given time, and a very good account of what is known of the innervation of the respiratory muscles. In the chapter on animal heat, the problems are stated with a very gratifying clearness, and the dependence of the temperature of the body on the relative activity of the production and the loss of heat most distinctly explained. The chapter is necessarily a short one, for there is no great variety in the experiments to be performed. In this second portion of the work, quite a number of misprints occur, which should be corrected in another edition.

Dr. Foster gives, in the third portion of the work, very minute directions for making a large number of observations on the properties of nerves and muscles, including the effect of stimuli of various sorts, and the demonstration of the electrical phenomena peculiar to those tissues, both in activity and repose. This, of course, involves the use of some rather delicate apparatus, the manipulation of which is very carefully explained.

The fourth portion of the work, by Dr. Brunton, begins with a chapter on albuminous compounds, which is followed by a second on the chemistry of the tissues. These two chapters together form one of the best handbooks of physiological chemistry in the English language. Many of the processes and reactions are taken from Hoppe-Seyler's well-known work. The chapters on indigestion and secretion contain excellent directions for obtaining the various digestive fluids and other secretions from the living animal, and the methods for investigating the peculiar properties of each. The author indicates, by a single or double asterisk, the more important experiments or processes, thus affording great assistance both to teacher and student.

In an appendix, are given rules for a variety of manipulations of great importance to students in a chemical or physiological laboratory.

The publication of this work may fairly be regarded as marking an important advance in physiological science, for it enables all students and practitioners of medicine to verify for themselves the experimental basis upon which scientific medicine must ultimately be built up.

H. P. B.

Foods. By Edward Smith, M.D., LL.D., F.R.S., of London. American Edition. New York: D. Appleton & Co. Pp. 476. 8vo.

This book is one of the International Scientific Series, now in course of publication by D. Appleton & Co., of New York. A few of the series besides this have been published. The others, we are informed by the advertisement, are in course of preparation.

The object of Dr. Smith's book is to give the latest scientific knowledge with regard to food, and at the same time to treat the subject in a manner sufficiently popular to be understood by the non-scientific classes. Water and air are very properly included in this volume and discussed as foods, with which they have most intimate relations, both in their sanitary and nutritive aspects. The subjects of diet and dietaries are not considered here. Dr. Smith has reserved the discussion of them for another occasion. He gives, however, a variety of tables, that are of interest and value both to the scientific and general reader, and a number of old recipes for the preparation of food, relics of the past, which are curious rather than valuable.

After a brief introduction upon the nature and qualities of foods, the book is divided into three parts. The first part treats of solid foods, and is naturally subdivided into two sections, which describe respectively animal and vegetable foods. Part second is devoted to liquid foods, with which it is noticeable that water and *alcohol* are classified. The third part describes gaseous foods, or atmospheric air and ventilations. A sufficiently copious index closes the volume.

Dr. Smith defines food to be "a substance which, when introduced into the body, supplies material, that renews some structure or maintains some vital process," a definition which is more comprehensive and philosophical than that of M. Voit, who defines a nutriment "to be a substance which is capable of furnishing to the body any of its necessary constituents, or of preventing the removal of such constituents from the body." According to M. Voit, starch is food solely because it protects fat from decomposition in the body, and if taken in excess causes the decomposition of fat there. According to Dr. Smith, starch is a food, not solely because it restrains the consumption of fat, but also because the changes through which it passes in the system, are accompanied at every step by the production of heat, that is, by the evolution of force. We should not refer to what at first sight seems so trifling a matter as this, were it not that much needless discussion can often be avoided by exactness of definition, and especially does this hold true with regard to food. Many wordy fights, with regard to the claims of alcohol to be considered a food, would have been avoided, if the combatants had agreed first upon a definition of terms. According to Dr. Smith's definition of food, every one would classify wines and the like under that head.

The chapter on alcohol and alcohols is one of the best accounts we have seen of the physiological and therapeutical action of those agents, but still it does ont present a complete account of them. Dr. Smith's views, which recognize fully the evils and dangers of distilled and fermented drinks, would not be indorsed by the intemperate advocates of the temperance reform. He favors, however, distinctly and unequivocably, the restriction of the sale and use of spirits, wines and beers to physiological purposes. Whenever the so-called friends of temperance will stand upon a physiological platform, they will exert an influence and bring about results, greater and better than any hitherto accomplished.

Dr. Smith's treatise is an excellent one, and physicians will find in it much that is valuable to them in the management of disease, and especially in the management of convalescence. The laity can read and study it with advantage, also, and without the danger of getting nervous over it. We commend it to all who desire to know how, when and what to eat. The typography of the American edition is excellent. E. H. C.

THE CIS-ATLANTIC NEW DEPARTURE IN MEDICAL TEACHING is the title of an Editorial in the *Peninsula Journal of Medicine* (Detroit). We quote the following extracts :—

"The fact that Harvard, with the inherited qualities of the stern old Puritans—the blue blood of New England flowing through her veins—has crossed the Rubicon is the first sign of the times. With the true heroism of her ancestors, has she buckled on her armor against the enemies of enlightenment, and drawn the sword in favor of scientific knowledge. A hundred have fallen away from her into less disciplined ranks ; but what has she not gained ? Has she not called to her standards, in the two years since her new departure, a class of men who cannot be equalled by any other college in the land ? Are not the profession in the East, West, North and South, beginning to send up their best qualified students to her halls, hospitals and clinics ; and is not Boston almost at once placing herself at the head of medical instruction of the best class ? For the one who has fallen away from her on account of her advanced requirements, two will be found, not far in the future, listening to her instructions. Can we not hope that our own University may soon be found following closely where she has lost the opportunity to lead ? We can understand, that whereever the compensation of the professors depends largely upon the number of the students, the initiative could hardly be expected from them ; and that this has been almost the sole reason for the delay, the profession at large most thoroughly appreciate ; but that institutions in which this has not been the case, should allow themselves to be kept back for so many long years, is utterly incomprehensible.

"We are not of those who believe that the Atlantic slope is destined to long define the bounds of all literary or scientific leadership ; that the Alleghanies can shut out from this great continental middle ground the light which is destined to vivify and develop all that is possible, or that can be required intellectually of this great people. Neither do we believe that the large, overgrown class system is conducive to the best teaching, or the best learning. The plan of Harvard, which is essentially the British system, and, according to Billroth, makes the best doctors in the world, can be introduced into any and every medical school in the land.

"Until reform is generally adopted in this matter, by American medical schools, and the directors and controllers of our institutions of learning meet this question of higher medical education squarely, face to face, we will be obliged to hold in more than usual esteem and consideration the professional brother who is entitled to inscribe after his professional initials the official stamp (Harv)."

Boston Medical and Surgical Journal.

Boston: Thursday, October 9, 1873.

Perhaps no one thing contributes more to the health of large cities than the fostering of a taste among the community for frequent healthy recreation in the open air. It is second only to the enforcement of sanitary laws which we are now, for the first time, beginning to appreciate, since the enjoyment of the luxury of an efficient board of health. It is a notorious fact that Americans, absorbed as they are in the pursuit of wealth, have, for generations, disregarded and neglected the means of recreation and rest from labor which the necessities of the human frame demand, until they have become nearly incapable of indulging in rational and healthful modes of enjoyment. We speak now more particularly of the laboring classes and of those whose means do not permit of an escape from the cares of business and hard work to the seaside and the country. A decided movement has taken place among the wealthier classes, of late years, and an entire change of scene and life for one or two months of the year is adopted by all who feel able to do so. In fact, people in this country are just beginning to learn how to live. The large and more numerous class of the community, who never leave the city, remain still to be provided for. If we make the tour of our streets on a summer Sunday afternoon, we shall find that it is but an insignificant portion of the inhabitants who now avail themselves of such parks as we now possess; nine out of ten are contented with their own door-step, the street corner, or perhaps a secret rum-shop. How, then, is this much desired change to be fostered and encouraged? The example of other countries may give us a clew to the solution of this problem. Great Britian is, perhaps, as poorly off as ourselves in this respect. There is scarcely a more gloomy spot on the face of the earth than many an English city on a Sunday afternoon. In London, however, it may be said, the case is somewhat different; the parks are large, numerous and beautiful, and a new one has lately been opened, the Victoria Park, expressly for the benefit of the working classes. The Alexandra palace, lately destroyed by fire, although a private enterprise, was intended for the same purpose.

When we come, however, to the continent of Europe, we see how much really can be done for public amusement. In addition to the large park in the immediate vicinity of every city of tolerable size, with a handsome avenue connecting the two, there exist innumerable places, in the city's environs, suitable for an afternoon's excursion, and what is more important still, the means of getting out of town are numerous and cheap. In most cities in Germany, the streets are well-nigh deserted on fine fête days and Sunday afternoons. It is not the beauties of nature, alone, which entice the families of these cities from their homes. The means of rational enjoyment are varied and numerous. It is not thought wicked to row on the lake, to play at some innocent game, or to frequent the neighboring restaurant, where dinner may be had in the open air, and lager beer and light wines are in abundance. Drunkenness and rioting are almost unknown to these people. It would take more space than our columns allow, to enumerate merely the opportunities which the poor man has for enjoying himself. The refining and healthful influence of this mode of life has left an indelible mark on the people of these countries. Can we not profit by their example? Such a radical change in the habits of the people as this would imply could not be brought about perhaps until after the lapse of many years, and then indeed could not be carried to the extent which obtains in the more equable climate of Europe. The advantages to be gained, however, by attractive well-kept breathing spaces, within the limits of a city, and an available public park in the neighboring country, have been demonstrated in many of our large cities, and it is to be hoped that public opinion will, ere long, urge a reform in these matters, and that Boston may appropriate some portion of her beautiful suburbs, before the opportunity is forever lost, and place this department in the hands of men sufficiently educated and competent to make it what it should be.

It is not to be expected that so great a reform as the acceptance of ether and the repudiation of chloroform, in England, should take place without many delays and much bitter discussion. Our chief surprise is that so much progress should have been made in so short a time. We have no desire to take part in the controversy, for, now that ether is on trial there, it may be left to its own merits, but we think it right to correct a gross mistatement which, if uncontradicted, might deter many from trying it. Dr. Charles Kidd, of London, has written a paper, which appears in the *Edinburgh Medical Journal* for August, which, besides many less important errors, contains the following sentence: "The well-known seven deaths at Lyons, and forty-one of the Boston committee, all from ether, are, from insufficient knowledge, forgotten or misrepresented." Any one, ignorant of the facts, would infer from this that a committee of Boston physicians had found that ether had caused death in forty-one cases. The truth is that a committee appointed by the Boston Society for Medical Improvement, to inquire into the alleged dangers of ether, collected forty-one cases of alleged death from its use, and reported, among other things, that there was "no recorded case of death, known to the committee, attributed to sulphuric ether, which cannot be explained on some other ground equally plausible, or in which, if it were possible to repeat the experiment, insensibility could not have been produced and death avoided." In many of these cases, it was simply preposterous to attribute the death to ether, as in sixteen it occurred at least three days after inhalation (in six cases, from eleven to sixteen days), and in others, not for several hours. It is hard to conceive how one, writing so confidently as Dr. Kidd does, should have made so inexcusable a blunder; perhaps he intended to illustrate, by an example, the misrepresentation "from insufficient knowledge" to which he alludes.

MEDICAL DEGREES FOR WOMEN.—The discussion begun in the English press after the recent decision of the Scotch courts adverse to the suit of Miss Blake and others, claiming degrees from the University of Edinburgh, is still in progress. The question now is, what shall women do who desire to obtain a medical education? Mrs. Anderson, M.D., recently published a communication in the *London Times*, advising those of her sex who were ambitious of professional service and honors to go abroad for their education and degree. The trouble in England is that it is now impossible for a woman to obtain the license of a legally qualified practitioner, without which, she is in the eye of the law a quack, unable to institute suits to recover fees for professional services, a disability for which the circumstance that she cannot be held responsible to the state for malpractice is but a poor compensation. Mrs. Anderson argued that the proper resentment for such privation was for the women who desired knowledge to shake the dust of England from their skirts, and honor the schools and hospitals of Paris by their patronage, until the English government came to its senses and removed the restrictions hampering the sex.

Miss Jex-Blake, one of the heroines of the late controversy in Edinburgh concerning the right of women to receive instruction in the medical school of the university, antagonizes the views of Mrs. Anderson in this particular. She thinks self-expatriation is the very worst and most foolish thing the women could do, and that it is, moreover, unnecessary. Writing from Edinburgh, she intimates that Mrs. Anderson concedes too much by assuming that all the Scotch universities are permanently closed to women, and points out how purely technical are the barriers now remaining between women and the privileges they desire. She is very hopeful of the speedy provision of a way to secure what is wanted, either in England, Ireland or Scotland. Suppose English women do go abroad to secure an education; they will be, when they return, on precisely the same footing as now, unless the laws are changed, and nothing will in her view do so much to prevent a change as an apparent acceptance of the situation by those who are most interested. Indeed, the opponents of the needed reform would hail the expatriation with satisfaction. The way of duty is not in this direction. It is more serviceable to the end to stand waiting and protesting.

Miss Jex-Blake points out the fact that the case is not so intolerable after all; at least, that there is a possibility open to women of obtaining a sound medical education at present. The extra-mural school in Edinburgh is open to them, and, with slight changes in the curriculum, a thorough medical education can be secured there without change of the existing conditions, and she is decided in the expression of opinion that it is infinitely better for Englishwomen to obtain their education at home, in their own language and amidst the social conditions in which their future practice will be. No foreign diploma or degree is acknowledged as qualifying the bearer for registration in England. The main thing is to get the laws changed, and she entertains a cheerful confidence that this may be effected during the next session of Parliament. In this connection, it ought to be stated that Mrs. Anderson has her legal status assured by a license of the Apothecaries' Company, granted some years ago, but of late that company has refused to recognize the sufficiency of private instruction.

The *Times*, in an article reviewing the matter, declines expressing any opinion as to the policy of going abroad for study, but is quite discouraging in its comment on the probability of speedy action by Parliament for the removal of obstacles. For several years, ineffectual attempts have been made to procure action on a bill reforming the standard of professional attainments for men, and the *Times* thinks that if those who are already in the ranks of physicians cannot get their wishes heeded, there will be little chance for those who are merely aspirants. The whole subject will have to be delayed until the government can be prevailed upon to bring in a general bill regulating the profession. As to the mooted project of establishing a medical school especially for women, the writer of the article thinks it would not pay, and the founders would discover, after spending a good deal of money, that they had to show for it only some useless and empty buildings. Evidently he does not believe that the demand justifies such an enterprise, and adduces experience in the United States to justify his opinions.—*Boston Daily Advertiser*.

THE CENTRE OF THE NERVES OF ERECTION. By WM. ASHBRIDGE, M.D.—Professor Goltz was induced, by the statement of Eckhard that the nervi erigentes could be followed within the spinal marrow and even up to the pons and into the cerebrum, to publish the results of investigations of the subject made by himself upon dogs, and which have led him to a different conclusion. He is convinced that the nearest centre from which the nerves in question have their origin, is the spinal marrow of the loins. After section of the posterior segment of the cord in the thoracic region, he was enabled to cause erection by reflex influence.

He found also that the occurrence of these reflex phenomena can be checked by irritation of nerves of sensibility.

Further than this, he observed characteristic rhythmical contractions of the sphincter ani in animals whose spinal cords had been cut, which could also be restrained by irritation of certain parts. He concludes that the spinal marrow of the lumbar region contains centres of influence of far more diversified character than has previously been supposed.—*Philadelphia Medical Times*.

Correspondence.

LONDON LETTER.

(From our Special Correspondent.)

LONDON, SEPT. 10, 1873.

THE annual meeting of the British Medical Association held here has been, according to quite universal assent, a very important and successful affair. It has exercised an influence which it is more easy to appreciate now, perhaps, than it was at the time of the meeting, and from it some lessons may be learnt which may be of interest to those who desire to see the American medical profession similarly knit together in a powerful association, and meeting annually in great numbers, and for the transaction of matters useful to themselves and calculated to raise the profession in public influence and estimation. That has undoubtedly been the character of the London meeting; nearly two thousand medical men attended it, and among these were all the most eminent men in the country, or nearly so. Fergusson, Paget, Jenner, Burrows, Hughes Bennett, Hilton, Curling, Gairdner of Glasgow, Macleod of Glasgow, Runnelly of Cheltenham, Paget of Cambridge, Humphrey of Cambridge, Ceely of Aylesbury, Quain, Marshall, &c., these are all names which you will recognize as amongst our most representative men, and, of course, they are only a few out of many. There were very few who were absent, and these only because the meeting falls at the close of the season, and the labors of the year prove so exhausting to some that they feel necessitated to get rest when the 30th of July has come. It may be interesting to examine what it is in the constitution of the British Medical Association that makes its meetings attractive to the best men, and gives it the power in the State which it unquestionably exercises. How is it that it numbers 6000 members? that it has flourished in spite of all obstacles and of great opposition? and that, when it met in London, it was welcomed by the Lord Mayor at an official reception at the Mansion House, prepared with great pomp and expense, and by the Prime Minister, Mr. Gladstone, who was at the pains to attend its banquet and to pay it the most handsome tribute of respect? and, farther, that the *Times*, the most exclusive and least professional of all political papers, devoted a great number of columns daily to the report of the proceedings? You will find, possibly, many different explanations from different sources; but, looking at the facts, they will be found to have their own logic.

The Association was founded forty years ago by a provincial physician, Dr. Hastings, who aimed at raising the country practitioners to a position more nearly resembling that of the great metropolitan practitioners than they then held. He wisely held that this was best done by uniting them in an effort to cultivate high objects, and to sustain their honor and prove their claims to position by the development of scientific effort and the maintenance of a high ethical code. The advance of the provincial practitioner in position since the establishment of this Association, has been marvellously great; the Association alone could not have effected this result. It is due, in no small measure, to the general diffusion of a degree of culture which was once the property of the few, and to such an improvement in the tests for diplomas, that the ordinary general practitioner of to-day is of necessity possessed of a larger amount of technical information than the hospital physician of forty years ago needed to possess, so far as strictness of examination demanded it of him. But the Association has had a vast influence in the fortunes of the provincial practitioner, by giving him what he did not before possess, the power which union commands and the ambition which that power begets. Fortunately, the men who guided the Association in early years were not beset by petty notions or by the wish to pull others down in the desire to aggrandize themselves. They worked in this way. They arranged branches or sections in all the different districts of the country (as far as they could); each section or branch elected its own officers, held its own meetings for scientific purposes, and elected one delegate for every twenty members, to act in the General Council. The General Council assembled once a year only, at the date of the annual meeting of the whole Association, and then proceeded to elect twenty members as a Committee of Council, or Executive Committee. This executive committee acts throughout the year as the ruling body of the Association in all matters of general policy, and it alone can speak for the Association. Besides the twenty elected members, the president for the year and the honorary secretary of each branch are also members of the executive committee *ex officio*. Thus, anything like jobbery is prevented. The Association can also appoint standing committees on particular subjects, throughout the year, but the action of such committees can be at any time controlled by the executive committee, who are also empowered to decide all questions of expenditure. The president of the executive committee is elected biennially, and is not competent for re-election, but becomes, on retiring from office, a life-member of the executive committee. The Association meets every year, in a different town, by invitation, and elects a president for the year from the practitioners of the town at which it meets. This alone gives dignity and prominence to provincial practitioners, and, as the nomination of the president of the year is made by the local profession, the result has always been satisfactory.

We come now to the question of funds and members. The great element of success in any institution requiring a subscription, is that it shall give some obvious and palpably adequate return for the subscription. Sentimental reasons will attract a certain income, but it will die off if not sustained by evidently sufficient results, and will never be large. The first return made was in the form of "Transactions," but such transactions were soon found to be of insufficient interest, and not to compare favorably with those of societies having a permanent residence in the great centres of learning and activity throughout the year. They were valuable, but they were tardy in issue and heavy in character. A weekly journal was found more lively, prompt and vigorous, and a return more valued, while it kept the Association well together and reported the affairs of all its branches. It has of late years developed into all the characters of a weekly paper of vigor, and, without saying anything more about it, I may say that it is popular and cheap, ranks as an authority outside the profession, and is read more largely than any other within it. It has been pointed out lately by the Council, by Dr. Quain, by Mr. Baker, and by all impartial observers, that the development of the *Journal* has greatly favored the growth of the Association.

It is, however, very apparent that the *Journal*, while helping the Association in an incalculable degree, has also raised up for it powerful enemies by the very fact of its existence. The whole influence of the other medical papers has, indeed, been incessantly employed against the Association, which they have with reason regarded as a rival publishing company, interfering with their business. In the case of the British Medical Association, where the constant meetings of the branches require not less than weekly publication to give cohesion and continuity to the work of the Association, it has answered well to brave that disposition, and the battle has been carried to a highly successful issue. It would be very unsafe to predicate a similar success for any other association, if placed under similar circumstances. What is really necessary is, to make a return for the money subscribed. Now, in the case of an annual association, experience has shown that money spent on "Transactions" should be limited. The professional papers may be trusted to give a fair account of the proceedings, and only the most important papers read should be published in the transactions. No money should be spent out of the funds of the Association on the reception and annual meeting. These should be entirely furnished out of the subscriptions raised *pro hâc viâ* from the local practitioners who have the honor and pleasure of receiving the visit of the Association. No money should be paid to any official, except the *under secretary*, who need not, and had better not, be a professional man (but a business man), and who need not, and had better not, have a vote in the Council. The annual meeting should be made attractive by arranging for the delivery of retrospects of medicine and surgery, obstetrics, physiology, &c., by eminent men, who should be officially invited to deliver them, by a joint arrangement of the local reception committee and the executive committee; ethical questions should be entirely excluded from discussion at the annual meeting, and referred, in the first instance, to local committees, and then to the general executive committee. For each day's work, a series of questions should be prepared; some one gentleman of known experience in the matter being invited beforehand to prepare a preliminary paper on the subject. Meetings so arranged could not fail to be popular; they would be proportionally influential, and there would be a handsome surplus for general and scientific purposes.

This is, of course, only an outline sketch of views which are derived from observing the course of our various British societies. I have stated them, perhaps, dogmatically in form, but not in intention; and the form is due to the necessity of being brief, with the hope of avoiding a fault into which I fear that I have nevertheless fallen, that of being tedious.

SEPTEMBER 26th, 1873.

MESSRS. EDITORS,—"Country Doctor," in your issue of yesterday, seems to question the statement, *said to be made* "in the books," that "the smallest angle of distinct vision is about one second," since he was able to see a single thread of spider web in the early morning, when the sun shone on it, at seventy feet distance, while this thread at the distance mentioned would subtend an angle of less than the hundredth part of a second.

If I understand Country Doctor's argument correctly, it is this:—The books say that the smallest angle of distinct vision is one second. I can see an object which subtends an angle of less than the hundredth part of a second. Ergo: the books are wrong.

I should like to point out some fallacies in this argument.

1st. The thread was seen in the early morning—clear and cold may be inferred from the fact that Country Doctor feared injury to his squash vines from frost. On such mornings, the threads of the spider's webs would, as is well known, be coated with dew, and thus the reflecting surface be much greater than that of the thread alone which was measured under the microscope.

2nd. Admitting that the object seen subtended but an angle of less than the hundredth part of a second in *one direction*, in the other, that of its length, it probably subtended an angle much greater even than the "one second" which Country Doctor appears to object to: i. e., if the thread were only three inches long, it would have subtended an angle of more than twelve minutes in the direction of its length.

3d. Seeing an object, and *distinct vision* of an object are very different things, in degree at least. In order that Country Doctor should have *distinct vision* (as understood "in the books") of his thread, he should be able to *accurately* distinguish such threads placed side by side and separated from each other by intervals only equal to the width of the individual threads.

4th. I am unable to find "in the books" the statement that "the smallest angle of distinct vision is about one second." The test usually employed for the determination of *distinct vision* is that of Snellen's test-types, and these, at the average extreme distance at which they are made out by the normal eye, subtend an angle of five minutes. According to Hooke, as quoted by Helmholtz, two stars, the apparent distance between which is less than thirty seconds, always appear as one, and scarcely one observer out of a hundred can distinguish them when their apparent distance is less than sixty seconds. Objects, however, which subtend an excessively small angle can be *perceived* by the eye, provided the intensity of the light coming from them is sufficient, as the fixed stars, for example. In the instance given, the direct rays of the sun were reflected from the threads of the spider's web, and the intensity of the light was therefore great. Very respectfully "MOTE."

Medical Miscellany.

TIMELY.—"Take every opportunity of learning to treat disease pleasantly—seek to make your medicines, your drugging of your patients, as elegant, as little nauseous, as little like medicines, as possible."—*Lond. Med. Times and Gazette.*

RIGHT.—"The medical man must warn the public from popular medical fallacies and the foolish pretensions of the quack. He will be called upon to expose the follies of homœopathy—a system founded in deceit, built up in ignorance, and supported by credulity. The true physician will endeavor to practice rational medicine, and not this or that system."—*London Lancet*, advice to students.

QUADRUPLE BIRTH.—A case of quadruple gestation is reported in the *Chicago Medical Journal* for September, occurring in the practice of Dr. L. B. Brown, of Sheldon, Illinois. The children were all girls, perfectly formed, and of fair size—two weighing five pounds each, and two weighing four pounds each. At the expiration of three and one-half months after birth, all the children were living and in a prosperous condition.

The Philadelphia Medical Times urges strongly the use of fosse d'aisance in that city for over-distended bladders, but fears that the public mind is not yet prepared for such an advance towards the convenience and comfort of the citizen public. It says "we plead for no such unblushing boxes as are to be found on the sidewalks of many streets in Paris. What we desire is the supply of a long-felt want, which is compatible with all decency, and the removal of one of the commonest and most frequent temptations of working men to go into rum-holes.

COOLING LOTIONS IN TYPHOID FEVER.—Jaccoud recommends aromatic vinegar as a cooling lotion in typhoid fever. This is to be applied by means of a large sponge, and the patient is then wrapped in a woolen blanket till he is quite dry. Each application should occupy about two minutes, and it should be repeated two or three times daily, according to the temperature of the patient. The lotions are to be kept up (unless the reaction is too severe) until the fever has entirely disappeared.—*L'Union Médicale*, Aug. 28, 1873.

WARM BATHS IN DISEASES OF THE CHEST.—M. Lasègue concludes, from a series of experiments performed in his clinique, that warm baths produce a diminution in the profuse perspiration of phthisical patients, and have the effect, moreover, of lowering the temperature and the pulse, quieting the anxious patient, and thereby inducing sleep. The temperature of the bath ought to be about three degrees below that of the body of the patient.—*France Médicale*, Aug. 9, 1873.

THE INTERNATIONAL MEDICAL CONGRESS has met this year in Vienna. The session commenced on Sept. 1, with a speech by the Archduke Rainer, in which His Imperial Highness welcomed the visitors to Vienna. The chair was taken by Professor Rokitansky as president, who delivered an address. Special discussions afterwards took place on subjects of sanitary and general professional interests, viz., vaccination, the prevention of syphilis and the control of prostitution; quarantine in general, and in its application to cholera; the formation of an international pharmacopœia; the drainage of towns; and the social position of the medical profession. It is somewhat remarkable in the constitution of this Congress that, though it bore the name of international, and several of its members were accredited to it by the governments and learned societies of their respective countries, there appears to have been a deficiency of representatives from some countries—notably England and Sweden. The next meeting to be held in Brussels in 1875.—*London Medical Record.*

A NEW METHOD OF DETERMINING THE PRESENCE OF, AND RECOVERY FROM, TRUE RINGWORM.—At a recent meeting of the British Medical Society, Dr. Dyce Duckworth called attention to the action of chloroform upon the infected hairs in cases of tinea tonsurans, showing that this agent possesses peculiar properties in affecting parasitically diseased hairs. It was demonstrated that this agent caused the hairs to become white or slightly yellow in color, and thus to be distinctly mapped out and easily distinguishable from surrounding healthy hairs. The causes of the change were briefly discussed, and the particular phases of the disorder suitable for this application were pointed out. The effect of chloroform on patches of favus, tinea versicolor, melasma and alopecia areata was likewise discussed.

WARTS.—Dr. S. M. Bradley favors the belief in the essential unity in origin of all morbid growths characterized by abnormal development of epithelial elements, such, e. g., as scirrhus, epithelium, epulis and common warts. He affirms that the simplest of these tumors may evolve the more complex by the agency of external forces, such as irritation, pressure, &c. (the influence of heredity being always great in determining the exact nature of the morbid product); and that the power and rate of infiltration and invasion of the general system is due to simple laws, such as the size and shape of the cells, their degree of moisture, and the nature of the surrounding tissues. He maintains that, as electricity, by coagulating the albumen of a part, establishes a barrier to the onward march of the cell elements, it should, therefore, be employed in all cases of infiltrating tumors, when it is decided to eradicate the growth.—*British Medical Journal.*

LARGE PROFESSIONAL FEES.—It is not often that a professional man has the opportunity, or perhaps feels equal to the effort, of returning two fees of a thousand guineas each, in the course of the same year. It is understood, however, that this has occurred with Sir Henry Thompson this year. The first occasion was in connection with the illness of Emperor Napoleon III., when Sir Henry, in the most delicate and kindly manner, returned half of his fee of two thousand guineas; and the second is an instance yet more highly honorable to professional delicacy. Called to the bedside of a wealthy friend in the Highlands, near whose shooting lodge he was passing his vacation, he spent nine days in unremitting attendance. At the end, a cheque of a thousand guineas was handed to him, but was firmly declined, on the ground that the attendance was given to a friend and during a holiday.—*London Medical Record.*

MARRIED,—In Stoneham, 30th ult., Dr. Winthrop F. Stevens to Miss H. Maria Curtis, both of Stoneham.

MORTALITY IN MASSACHUSETTS.—*Deaths in seventeen Cities and Towns for the week ending September* 27, 1873.

Boston, 151—Charlestown, 18—Worcester, 19—Lowell, 31—Chelsea, 8—Cambridge, 12—Salem, 14—Lawrence, 12—Springfield, 11—Lynn, 16—Gloucester, 3—Fitchburg, 4—Newburyport, 2—Somerville, 8—Fall River, 25—Haverhill, 10—Holyoke, 3. Total, 347.

Prevalent Diseases.—Cholera infantum, 63—consumption, 60—typhoid fever, 27—dysentery and diarrhœa 15—scarlet fever, 13.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, Oct. 5th, 159. Males, 87; females, 72. Apoplexy, 3—inflammation of the bowels, 3—bronchitis, 4—congestion of the brain, 1—disease of the brain, 6—cancer, 4—pelvic cellulitis, 1—cholera infantum, 13—cholera morbus, 1—consumption, 13—convulsions, 5—cerebro-spinal meningitis, 1—debility, 3—diarrhœa, 4—dropsy, 1—drowned, 2—diphtheria, 6—dysentery, 2—scarlet fever, 6—typhoid fever, 9—disease of the heart, 6—hæmorrhage, 1—intemperance, 3—disease of the kidneys, 3—inflammation of the lungs, 10—marasmus, 7—noma, 1—old age, 7—paralysis, 3—premature birth, 3—rheumatism, 1—disease of the spine, 1—syphilis, 1—teething, 4—tumor, 1—unknown, 1.

Under 5 years of age, 65—between 5 and 20 years, 11—between 20 and 40 years, 28—between 40 and 60 years, 29—over 60 years, 26. Born in the United States, 102—Ireland, 42—other places, 15.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

PUERPERAL AMAUROSIS; ITS IMPORTANCE AS A SYMPTOM.

By Henry W. Williams, A.M., M.D. Harv., Professor of Ophthalmology in Harvard University.

Case I.—July 28th, 1873, I was consulted by a married woman, forty-three years of age, who wished to obtain glasses for the relief of defective vision. Her account was that, after two miscarriages, she had been confined four months previously; and that before the birth, she had suffered from headaches, had considerable albumen in the urine, and had nearly lost her sight. After delivery, she had gradually gained strength, but her nervous system, always excitable, had been depressed by the loss of her infant, and she still complained of a feeling of general exhaustion, and of very imperfect vision both for far and near objects. She could only distinguish No. XL, of test-letters at 20 feet, though she was able to read with +30, and still better with +18, for a short time only. No glasses improved her perception of distant objects.

The visual field was not limited; but the ophthalmoscope showed an *apparent* white atrophy of the optic nerve disc in both eyes. There was no appearance of albuminuric retinal degeneration or other marked changes in the fundus of the eye, beyond the apparent atrophy. In view of the generally depressed state of the system and of the facts of the non-limitation of the visual field and the already improving sight, which the patient felt assured was still changing for the better, I felt warranted in the hope that the apparent atrophy of the optic disc might be only a result of an anæmic condition, and would allow of a favorable prognosis after the general condition of the system should be improved by rest and change.

Case II.—On the evening of the same day, a friend informed me that a patient of his, in regard to whose blindness in one eye he had previously asked my opinion, had just been delivered. She was a lady, thirty-seven years of age, who had been six times pregnant. When between three and four months enceinte, she began to have œdema of the face and the lower limbs, but the same had been her experience on previous occasions. On the 5th of

June, she had an attack of bilious colic which was speedily relieved, and she had no further trouble with the stomach and bowels. From this time, the œdema rapidly disappeared, and she had a voracious appetite until her confinement. No albumen, or, if any, only a slight trace could be detected in the urine at the time of the attack of colic. On July 16th, twelve days before her confinement, everything appeared quite black to her right eye. With both eyes open, she saw an appearance as of the vapor over a hot stove. From this time till the 25th, she was nervous and restless, and on this day had some slight labor pains, with a slight show of a semi-bloody and greenish color. On the 26th, the os was patulous, but she had good sleep and no further pains. Albumen was now found in the urine. In the afternoon of the 27th, there was a large gush of greenish brown waters and one strong pain. Labor terminated at 9¼ P.M. The child was of fully eight months, very white and clean. The cord, for some distance from the navel, was green, gangrenous and of putty-like consistence. When cut, a drop of grumous matter exuded from each end. Near the placenta, the cord was stronger, but would not bear traction. The inner surface of the placenta was modulated and greenish. The mother believed the death of the child to have occurred two or three days before, as she had then ceased to feel movements.

Within an hour after the accouchement, the patient was able to distinguish with her right eye the outline of a picture frame, hanging opposite her bed, and this improvement in sight rapidly increased day by day.

No special treatment had been resorted to for the relief of the blindness, beyond enjoining unusual care to avoid fatigue or efforts which might induce cerebral congestion; but the patient was carefully watched, that any threatening symptoms of puerperal convulsions might be averted.

The *Berliner Wochenschrift*, June 9th and 16th, 1873, contains an account of four cases of puerperal amaurosis, by Dr. F. Weber, of St. Petersburg. The first case was of a small chlorotic woman, only eighteen years of age, who, in the middle of her term of pregnancy, was suddenly reduced from affluence to poverty, and awaited her accouchement amidst cares and hardships to which she was wholly unaccustomed. Towards the end of her term, she had œdema of the face and lower limbs. At the beginning of labor, she was suddenly seized with eclampsia, of which she had six paroxysms within fourteen hours, notwithstanding the use of chloroform and of subcutaneous injections of morphia. She was delivered with forceps, and then continued for six hours in a tranquil sleep, with natural respiration. On recovering consciousness, she perceived that she had become entirely blind. The pupils were widely dilated and immovable. She had no perception of light, but was annoyed by sensations as of flashes and sparks within the eyes. Only small quantities of urine were passed, and these contained much albumen.

Ice was applied to the head, and bromide of potassium given in considerable doses, which treatment was soon followed by alleviation of the severest symptoms, especially the flashes. After three days, light was perceived, and in two days more, vision was quite restored; though flashes could still be seen when the lids were closed, and some weakness of vision and temporal headache continued for several weeks. The albumen in the urine diminished from the time of labor, and had disappeared at the end of six days. Patient had, afterwards, other pregnancies with no abnormal consequences.

The second case was a woman of forty-two, somewhat corpulent though anæmic, who had borne and suckled thirteen children. In three of the previous labors, there had been adhesion of the placenta, requiring manual efforts for its separation. During this last pregnancy, she suffered from great œdema of the face and extremities, with dull headaches, giddiness and severe vomiting. A strong convulsion followed the expulsion of the amniotic fluid, which was treated by chloroformization and morphia injections, and which was followed by two others of less intensity. The removal of the placenta was again required, and the atony of the flaccid uterus was only overcome, after dangerous prostration had come on, by stimulation of its inner surface. After the patient recovered consciousness, she complained of headache and flashes before the eyes, and, ten hours later, she became entirely blind. This complete amaurosis continued four days. On the fifth day, perception of light was regained, and on the sixth, vision was fully restored, though the sparks and flashes continued to be very annoying when the lids were closed. The urine was at first loaded with albumen, which continued in appreciable quantity for some weeks, although the amaurosis had quite disappeared. Patient had afterwards two children, with no recurrence of eclampsia or amaurosis.

The third case was a large obese woman of forty, who had borne six children without accident. A few days before the end of her term, she strained herself in moving a piece of furniture, and this resulted in premature escape of the waters and ineffectual labor pains with threatened convulsions. Applications of ice relieved the cerebral congestion, and the child was safely born. The patient now complained of severe headache and sparks and flashes before her eyes. Six hours afterwards, she had amblyopia, and, four hours later, amaurosis so far complete that only the faintest perception of a bright light remained. Two leeches were placed over each mastoid process, and the ice to the head was continued. By these means, the injection of the conjunctiva and the turgidity of the whole face was lessened, but the blindness persisted. A blister was now applied to the nucha, bromide of potassium was given in large doses, and the ice was still used. After fourteen days, the amaurosis had diminished, and at the end of four weeks, it had disappeared. Albumen was not at any time found in the urine. Eighteen months afterwards, the patient was again confined, no abnormal symptoms supervening.

The fourth case was a woman of thirty, in her third accouchement. Eight hours after birth, pains in the forehead and temples, heaviness of the head, with quivering of the facial muscles and especially of the eyelids, were the forerunners of complete amaurosis. The pupils were widely dilated and insensitive to light, of which the patient had lost all perception. The scanty urine was albuminous. Convulsions being anticipated, an ice bladder was applied to the head, and chloroform was kept in readiness. Notwithstanding this, a severe eclamptic fit came on some hours after the blindness, and this was followed by a second, an hour later. Chloroform and subcutaneous morphia injections mitigated the force of a third convulsion, and the mild coma which ensued was soon replaced by quiet sleep and regular breathing, which continued twenty-four hours. At this time, quivering of the facial muscles and changed respiration seemed premonitory of another convulsion, which, however, was averted by immediate chloroformization and hypodermic injections. Awaking at last to full consciousness, the patient had the satisfaction of finding that the amaurosis had disappeared. Objects could be clearly seen. The pupils were of normal size and susceptibility, and only pains in the eyeballs and flashes and sparks when the lids were closed were complained of. The albuminuria did not disappear for several weeks.

The relation of puerperal amaurosis to puerperal convulsions is shown to exist, and though, to use the words of Dr. Weber, we cannot regard the former as invariably a premonitory symptom of the latter—since eclampsia is of far more frequent occurrence, and even in these cases frequently precedes the blindness—yet the occurrence of amaurosis during parturition should induce watchfulness to guard against complications.

The presence of albumen in the urine, though a usual coincidence, does not seem to have an absolutely determinative influence; as it is absent in some cases, and in others may long outlast the amaurotic symptoms.

The proportion of primiparæ attacked is small; reversing the ordinary rule as to eclampsia. Fortunately, the occurrence of blindness during one puerperal period, does not involve the probability of its recurrence in the patient when she again finds herself in similar conditions.

15 *Arlington St., Boston,* Aug. 20, 1873.

TINCTURE OF DIGITALIS AND CHLORAL HYDRATE IN DELIRIUM TREMENS.

By E. Chenery, M.D., Boston.

Having, in the course of twenty odd years, seen numerous cases of delirium tremens under various kinds of treatment, it is with peculiar pleasure that I record the following very remarkable success as a result of chloral hydrate in conjunction with tincture of digitalis.

Mr. B., a Scotchman, aged 35, accustomed to army life, was for many years connected with the Indian service in the west. During this time, he acquired the habit of using alcoholic drinks, which has followed him till a few months ago, when he was induced to reform. He got on very well for a time, when the old appetite was aroused in him by the thoughtless use of some light beer which he made and sold in connection with his other business, and in which there was a free amount of Sanford's ginger. Strong drink was now called for, and, becoming incapable of carrying on his business, "he went on a time." Alcohol became more and more the substitute for his food, till his system became poisoned, his tongue parched and swollen, his face congested, his breath fœtid and he could neither eat nor sleep. When I first saw him, he had neither taken food nor slept for nearly a week, and rejected everything which was put into his stomach; his mind was greatly agitated, and his whole muscular system was in a state of continual unrest. His pulse was feeble and frequent, amounting to 120, and could not be counted at the wrist on account of the commotion among the tendons. He had taken bromide of potassium, without effect, before my visit. A strong mustard plaster was applied to the pit of his stomach; when well under way, fifteen grains of chloral were given, and, in twenty minutes, twenty drops tincture digitalis. These were both retained and had a favorable effect upon the tremors. Ten minutes after the digitalis, a dose of thirty grains of chloral soon brought on a sleep of three hours, when he awoke with relief to his trembling and in a much better state of mind. A raw egg and some milk were then given with another portion of digitalis, and, in a short time, thirty grains more of the chloral. From this time, he passed off into a sleep of many hours and awoke refreshed. The digitalis was given three times a day for several days, partly to moderate the pulse which remained at a hundred, but mainly for its eliminating effects upon the kidneys; and small doses of the chloral as occasion required. An infusion of quassia with a return to solid food, as his appetite required and his stomach would bear, completed the cure, which, taken all in all, was the most satisfactory that could have been desired.

This was not a case caused by leaving off his cups, but the direct result of their excessive use. From the moment he came under treatment, he was not allowed another drop, except what was in his digitalis. That he would have recovered without treatment is quite doubtful, since he was then in a gradually sinking condition and had not for days taken a mouthful of food which he did not instantly reject, even a teaspoonful of milk being as quickly rejected as it was swallowed, though it is possible that he might have been sustained by nutritious injections till the alcoholism wore away. Opium was obviously contra-indicated by the parched mouth and fœtid breath, for whatever advantage might have been hoped for from sleep, which it might be expected to give, would have been more than offset by the increased retention of the alcoholic poison and other effete matters which required to be eliminated. The chloral then to produce sleep and to quiet the nervous agitation, and the digitalis to reduce the frequency of the heart's action and to promote elimination by the kidneys, was evidently the rational indication, which the results fully justified. The mustard over the pit of the stomach and a small dose of chloral at first were necessary, in order that the first dose might be retained and prepare the way for a full dose which could not have been given at once. Moderate doses of chloral, to be repeated as circumstances justify, are all that any case of delirium tremens is likely to require, since, as Dr. Murchison thinks, there are grounds to believe that the existing impurities of the blood in such a case favor the action of the chloral by its more speedy conversion into chloroform.

FRACTURES OF THE INTERNAL EXTREMITY OF THE CLAVICLE. By Dr. E. DELENS *(Archives Gén. de Méd.,* May, 1873).—The study of these fractures has been hitherto somewhat overlooked. They are not very rare, though the number of recorded cases is not large. The whole number given by Dr. Delens, including eight of his own, is only twenty-eight.

The fracture is almost always oblique, without much over-riding of the bones, and, consequently, with little shortening. Mobility and crepitation are less marked than in fractures of the shaft of the bone, and this, without doubt, in connection with nearness to the articulation, is the reason why they must have been confounded often with luxations. Tumefaction and deformity are much more prominent in fractures produced by muscular contraction than in those by external violence, as by a fall upon the shoulder, the most ordinary cause. On the other hand, mobility and crepitation, while frequent in the latter cases, are seldom present in the former. The direction and state of the fragments are obscured usually in fractures by muscular contraction, but are more easily made out in other cases. Pain on motion is not a constant symptom ; but pain on pressure is sometimes an important aid to correct diagnosis. Consolidation takes place in about the usual time. Treatment requires no special directions. Mayor's scarf, or Sayre's bandage, for its simplicity, may be used when immobility seems increasing.

Progress in Medicine.

REPORT ON PATHOLOGY AND PATHOLOGICAL ANATOMY.

By R. H. Fitz, M.D.

General Pathology.

Fungi in the Blood.—Riess *(Centrbl.*, 1873, p. 530) takes exception to some of the statements of Birch-Hirschfeld (previously referred to in this Journal), and, after a series of investigations, comes to the conclusion that there are no means, chemical or microscopical, by which micrococci can be distinguished in the animal organism from detritus. In consequence, the assigned importance of the many abnormal elements found in the blood and organs, in infectious diseases, is not possible, as no sure proof of the parasitic nature of such processes has been obtained.

Birch-Hirschfeld *(Centrbl.*, 1873, p. 609), in reply, refers to his published recognition of the detritus referred to by Riess, but still retains his opinion that, in addition, globular bacteria are present, and that their exact nature is to be determined, in part, through chemical reagents. He admits, at the same time, that the parasitic nature of such diseases is not yet assured.

Obermeier *(Centrbl.*, 1873, p. 145) has discovered, in the blood of individuals suffering from recurrent fever, extremely delicate, thread-like bodies, of the thickness of a fine thread of fibrine, and as long as the diameters of from 1½ to 6 or more blood corpuscles. The blood being removed from the patient and the corpuscles allowed to become quiet, it was found that these threads possessed extremely rapid movements. These movements are of two kinds, undulating and locomotive. When locomotion took place, the threads became crooked, circular or cork-screw like; then elongating, they would leave the field of vision either gradually or suddenly. Locomotion ceases after one to two hours; undulation may continue up to eight hours. They are easily to be distinguished from threads of fibrine. These bodies were first seen by their discoverer in 1868, but lack of material has hitherto prevented investigation. Up to the time of publication, they had been found only during the fever, and shortly before or during the crisis, not in the remission. No decision was arrived at as to their nature.

Obermeier *(Centrbl.*, 1873, p. 561) inoculated animals with the blood from patients with recurrent and typhoid fever. The blood was injected subcutaneously, and into the jugular veins of dogs, rabbits and guinea-pigs. The results were negative. Nevertheless, he considers that the presence of the contagium in the blood is not thereby eliminated. Accidental or intentional inoculation of such blood, through cracks in the epidermis, produces no infection. As an explanation for the lack of success in producing the disease experimentally, he suggests that special conditions or preparations are necessary for the reception of the contagium in the living organism.

Wolff *(Centrbl.*, 1873, p. 497) has continued his experiments with regard to the effect of fungi introduced into the blood. It may be remembered that he was unable to conclude that the active deleterious principle of putrid blood was to be found in bacteria. In his present publication, he gives the results of experiments with the contents of metastatic abscesses and the secretion from gangrenous wounds. In comparing the action of these fluids with that of a fluid in which fungi from the preceding were cultivated, he found that the latter, in the same doses, was by far less deleterious than the former. With the microscope, the same forms of fungi were found in the three fluids. The bacteria were of various forms, a noteworthy observation where special forms of bacteria have been regarded as productive of special diseased processes. In addition, he records that, with Hartnack 10, prismatic bodies were found in the peritoneal exudation of puerperal fever, hardly as large as the diameter of a red blood corpuscle.

Küssner (*Centrbl.*, 1873, p. 497) opposes the view that the microsporon septicum is characteristic of the septic processes, as he finds the same in trivial abscesses. He states that he was able to free fluids from bacteria by filtering through a double layer of filter paper in a glass funnel, whose nozzle was plugged with boiled cotton-wool. The filtrate, as well as the fluids containing bacteria, produced death after injection; the *post-mortem* appearances were alike—ichorous and purulent infiltration of the cellular tissue, and, finally, abscesses at the point of injection. There was no pathological alteration of the internal organs, nor were bacteria found in the blood, nor in the greater glands of the abdomen. He concludes that the action of the injected fluids depends upon chemical processes of decomposition, independent of the bacteria. A temperature curve, characteristic of sepsin poisoning (Tiegel), was not found.

Inoculability of Cancer.—Desirous of ascertaining the effects of cancer grafts upon the body of rabbits, Hyvertl (*Gaz. des Hôp.*, No. 49, 1873, *Allg. Med. Centr. Zeit.*, 1873, p. 602) undertook a series of experiments. The portions of tumor free from pus, and not far advanced in development, were introduced deep into the tissues as far as the muscular layer.

Inflammation and induration resulted, the latter to be felt five months afterwards as a "tumor." This was surrounded by a tissue rich in vessels, and presented its previous appearance: cancer cells and alveoli at the periphery, granulations commenced towards the centre; at the latter point was calcification. The autopsy showed that neither infection nor general disease resulted. The author concludes that young cancer cells, transplanted from man to animals, do not produce cancer.

Exophthalmic Goitre.—Boddaert (*Bull. de la Soc. de Méd. de Gand, Gaz. Méd.*, 1873, p. 141) experimented on rabbits with reference to the origin of this condition. Ligatures were placed upon the external and internal jugular veins at the base of the neck, and the two cervical cords of the sympathetic were cut. An exophthalmia resulted, continuing several days, diminishing gradually as the collateral venous circulation became developed, and as the effects of the section of the sympathetic disappeared. Exophthalmia following the ligature alone, due to distention of the orbital veins, is much less pronounced. An enlargement of the thyroid is produced by section of the sympathetic and ligature of the inferior thyroid vein between the four jugulars. These experiments, combined with the discovery of lesions of the sympathetic, whose effects are analogous to those produced by section (atrophy of nerve elements, hypertrophy of connective tissue) in a number of cases of Basedow's disease, are considered as explaining the phenomena of the disease. In exophthalmic goitre, an obstruction to the circulation occurs; the superficial veins, especially of the neck, become swollen; there is a tendency to hæmorrhage, an increase of splenic and hepatic dulness, occasional dropsies, œdema, and the enlargement of the retinal vessels observed by Graefe. Boddaert hence produces this theory of exophthalmic goitre. In the majority of cases, the pulsations of the heart increase in number—120 to 200 even; this may continue for months. The veins are insufficiently emptied during the diastole; a venous congestion results, more marked from a more or less complete paralysis of the sympathetic. The effects become most marked in the eye and thyroid body, from the development of the retro-ocular venous system and the great vascularity of the thyroid. This theory is considered as explaining the observation of Trousseau, where the exophthalmia and the thyroid tumor came on during a night, the goitre disappearing suddenly and returning afterwards; also, the diminution of the exophthalmia and the thyroid body, as the heart beats less rapidly.

SPECIAL PATHOLOGICAL ANATOMY.

Ulcerative Endocarditis.—Dr. Lanceraux publishes a paper *(Archiv. Gén*, 1873, p. 672) endeavoring to establish a causal relation between the paludal poison and the ulcerative, vegetative form of endocarditis. He states at the outset that he has already endeavored to prove that rheumatism is not the source of the vegetative, ulcerative endocarditis occurring in the puerperal condition. His ground being that the anatomical characteristics of the rheumatic and puerperal endocarditis differ, hence they cannot have the same origin. Though in both diseases the mitral valve is by preference affected, in the rheumatic form, the entire valvular orifice is diseased, while puerperal endocarditis is always limited and circumscribed. In the former instance, permanent valvular lesions must occur, while, in the latter, a permanent organization of the new tissue is impossible, its destruction producing a fatal infection, so to speak, of the organism. The object of the present paper is to show that there is a vegetative, ulcerative endocarditis, preferring the aortic valves, and common among people who have had intermittent fever. From its localization, anatomical characters and evolution, it must bear a certain relation to the paludal poison.

A number of cases are reported, the clinical phenomena bearing a resemblance to the disturbances produced by septicæmia. In the cases reported, the puerperal condition could not have been a cause, and, as the lesions of rheumatism are regarded as different, this affection must be eliminated from the causes. The symptoms are considered as excluding the latter disease. The pains, existing in certain cases, were of a different character from those occurring in acute articular rheumatism and were attributed to the effect of a general infection. The coincident history of malarial infection in all the cases and the identity of the alterations render it probable or at least worthy of investigation, as a relation of cause and effect. It is possible that alcoholic excess may have aggravated the condition. The disease is distinguished from the chronic aortic affections by the presence of fever. The prognosis is grave on account of the rapid progress and the tendency to ulceration. The valves once destroyed, a fatal termination results on account of the obstructed circulation and the septicæmia following the destruction. In one of the cases reported, sulphate of quinia produced amelioration.

Brown Induration of the Lungs.—Orth calls attention (*Virch. Arch.* vol. 58, p. 126) to an alteration of the vessels observed in such a case. The capillaries and larger vessels were filled with pigment masses similar to those occurring in the interstitial tissue. The vessels at times appeared as if actually injected with brown, granular pigment. Artificial injection showed that such portions were completely obstructed. He regarded the appearance of certain communicating vessels as indicative of compensation for this obliteration. Such vessels pursued a more direct course, and had but few collateral branches. The previously described condition of the vessels he considers as indicating that a direct formation of pigment, from the red blood corpuscles, may take place without the mediation of other cells (Langhans).

Inflammation of the Lungs.—Lungenentzündung, Tuberkulose und Schwindsucht. L. Buhl, Prof. &c. München, 1872.

Untersuchungen über Lungenentzündung &c. C. Friedländer. Berlin, 1873.

Prof. Buhl's monograph of 164 pages is one demanding the most thorough attention from all interested in such matters. Whether the views are accepted or not, valuable suggestions are presented, and in such a form that the continued interest of the reader is retained.

Within the space allotted to this report, a complete abstract is impossible. The text appears in the form of twelve letters, and includes the various forms of acute and chronic inflammation of the lungs, together with the author's ideas as to tubercle, tuberculosis and tuberculous pneumonia, with a final chapter devoted to phthisis.

The distinction between a superficial and parenchymatous inflammation of the lungs holds good only so far as the one or the other condition predominates, the two always co-existing. The alveolar epithelium is regarded as a continuation of the endothelium of the lymph vessels, expanded over the free surface of the alveolar wall, and not as a continuation of the epithelium of the bronchial tubes. The superficial inflammations are those where the products originate in the epithelium, or flow over its surface; the products of the parenchymatous forms are interstitial and peri-bronchial.

The terms lobular and lobar are applied rather to the method of origin and extension, than to the boundary. Lobar refers to primary disease of the pulmonary parenchyma; lobular, to primary disease of the bronchi. Those diseases proceeding from the lymph vessels are not easily divided into these two forms. The chronic forms are particularly distinguished from the acute by the presence of extensive and important degenerative conditions when superficial; by an increase of connective tissue, the formation of cicatrices, &c.; when parenchymatous, interstitial or peri-bronchial.

The acute catarrhal pneumonia of the books is an acute disease, affecting primarily the posterior portion and edges of the lower lobes, presenting the appearances thus described by Rokitansky:—" the finer bronchi and their terminations are not unfrequently the seat of an intensive inflammation, which becomes at once extended over the pulmonary tissue; this appears, generally, in numerous lobular portions, swollen, hepatized or filled with pus." The term catarrhal pneumonia demands a catarrh in the pulmonary tissue, and the presence of a mucous membrane; as the latter does not exist, the term is improper. A catarrh of the mucous membrane of the smaller and smallest bronchi, filling these with pus and mucus, even when extending to the alveoli, cannot be a catarrhal pneumonia; the alteration of the latter is modified and secondary, The catarrhal pneumonia is "a capillary bronchitis, a bronchiolitis, in which the lungs participate through collateral œdema, atelectasis, local emphysema and engorgement, as a result of the transfer of the bronchial secretion to the individual alveoli." The œdema is merely a collateral phenomenon of the capillary bronchitis; atelectasis and emphysema are not inflammatory.

The bluish-red color of the atelectatic lobules represent a distention of the capillaries with blood when the intra-alveolar pressure has ceased. The lobular nature of the affection is due to the presence of material in the communicating and adjoining alveoli, produced elsewhere, and transferred through aspiration and migration (pus corpuscles, i. e. white blood corpuscles).

Death or recovery may take place. The latter event is based upon the fact that the true pulmonary parenchyma remains intact. Expectoration, fatty degeneration and absorption permit the removal of the products of inflammation and the access of air.

If these changes do not take place speedily, as in feeble children, the aged and in the course of severe disease, certain portions may remain permanently altered, as local emphysema, and, more particularly, atelectasis, in which latter instance, the parts affected may become converted into pigment nodules or cheesy masses. In addition, the plugs in the smaller bronchi and alveoli may remain permanently as cheesy masses. The alterations, when superficial, produced by foreign bodies, bear a very close resemblance to those occurring in so-called catarrhal pneumonia. A rare termination of the bronchiolitis is the dilatation of the alveoli and bronchi, accompanied with atrophy, thereby distinguished from that resulting from other causes, as peribronchitis. Catarrhal pneumonia is, therefore, a capillary bronchitis.

Croupous pneumonia is primary in the parenchyma, secondary in the bronchi.

[To be concluded.]

CONVALESCENCE IN TYPHOID FEVER.—Dr. P. W. Latham writes to the *Lancet* of July 5, 1873, that the only satisfactory answer to the question, When is a patient convalescent from an attack of typhoid fever? is, after the morning and evening temperatures, and especially the latter, on *at least* two successive days, have remained about the normal point, or between 98° and 99° F. The patient's tongue may be clean and moist, the appetite ravenous, the patient crying out for food, and the typhoid ulcers still unhealed. The thermometer alone will tell us this; it will probably show, at this stage, an evening temperature of about 101° F., with a morning temperature of 1.6° to 2° lower, and a mutton chop might now be sufficient to induce fresh irritation of the intestinal ulcers, fatal hemorrhage, or perforation.

Bibliographical Notices.

A Practical Manual of the Diseases of Children, with a Formulary. By Edward Ellis, M.D., Physician to the Victoria Hospital for sick children; late Physician to the Samaritan Hospital for women and children; and formerly obstetric physician's assistant to University College Hospital. Second edition. Philadelphia: Lindsay and Blakiston.

The above work is designed, we are informed by the author in his preface, to present concise yet thoroughly practical descriptions of the principal diseases of children. The book comprises 339 pages, and is divided into nine chapters. The various diseases, coming under the head of the respective chapters, are treated of in as many different sections, mostly short ones, being numbered from one upwards.

The first chapter is devoted to general observations on management and diet during the first year of life, with many useful hints as to the best way of examining infants. Appended is a diet table. Chapter second treats of general diseases, the author recognizing five, viz., scrofula, tuberculosis, rhachitis, syphilis and acute rheumatism. Throughout the book, we find frequent reference to these "diathetic states." The prominent part played by the first four in the causation of diseases, as well as in the modification of their course, offering often the most important indications for treatment, nobody will deny; but many of the author's statements on this subject are more theoretical than based upon facts, as, for instance, his description of the temperament and physiognomy peculiar to scrofulosis as contrasted with those in tuberculosis. Dr. Gee is quoted as thinking freckles a sign of much value in the diagnosis of tuberculosis. "Scrofulous deposits," we are told, "consist of albumen, gelatine, fibrine and a little stearine," whereas "tubercle is probably an exudation of the liquor sanguinis, and consists of animal matter, albumen and salts, such as the insoluble phosphates and carbonate of lime, soluble salts of soda and cholestearine." In speaking of the diet during the first year of life, we are told that "it is the children of the rickety and of the rheumatic diatheses that suffer from dyspepsia and 'weak stomachs.' Tubercular children are far hardier in this respect, whilst the strumous and the syphilitic occupy a median position." Further on, he says, "it is the child of gouty and rheumatic parents that suffers so often from acidity, and who requires most especially that his food should be alkalinized by lime-water." In another part of the book, we find it stated that "erythema intertrigo is common in the rheumatic diathesis," and, to quote once more, dysuria or painful micturition is spoken of as being "often associated with chronic skin affections and the rheumatic diathesis, and there may be smartish fever and considerable dyspepsia as concomitants." In the treatment of rickets, the author rightly gives to cod-liver oil the most important place, but we fail to see the necessity of its combination with lime-water. Syphilis he divides into a "congenital" and "infantile" variety, the latter applied to what would ordinarily be called acquired. Chapter third is devoted to skin diseases. Many of those here treated could well be left out, as so rare in children as not to be worthy of mention or as presenting no peculiarities in childhood requiring especial notice in a work upon children's diseases. Psoriasis and lepra are described under different sections, and we are told that they are often "symmetrical and hereditary." "Scrofula seems to be a disposing cause and a disordered stomach an exciting cause. The disordered stomach gives the first indication for treatment, and we must consequently unload and regulate the excretions of the primæ viæ." The advice to "unload and regulate the secretions of the primæ viæ" and to "administer saline cathartics" occurs, we think, too frequently in the book, given in a very vague and indefinite way, without any special indications other than the mere fact of the existence of some cutaneous or other disease, and, if blindly followed, might lead sometimes to mischief. Throughout the book, the author refers, when at all, but very briefly and superficially to the pathological anatomy of the different diseases, but we must find fault with such statements as that "eczema is an inflammation of the sweat follicle" and that "impetigo is a suppurative inflammation of the hair follicles" and "is contagious." The three following chapters treat respectively of diseases of new-borns, of fevers, and of diseases of the brain and nervous systems; and chapter seventh, of diseases of the air passages and of the thoracic organs. In the section upon hypertrophy of the brain, the author fails in his attempt to give a description by which the disease could be recognized, nor can we imagine, in case of the existence of such disease, that Dr. Churchill's plan of painting the shorn head with tincture of iodine and the administration of iodide of potassium in fair doses, could be of any benefit. From some of the symptoms given, and from mention of Dr. Elsässer's employment of a small horse-hair cushion for the head to rest upon, a hole being cut for the occiput, &c., it is evident that, partly at least, this disease is confounded with craniotabes. Croup and diphtheria meet with appropriate treatment, and the indications for tracheotomy and the method of operating are carefully laid down. The catarrhal nature of spasmodic croup (spurious croup) is not alluded to, and the author incorrectly associates it with the tubercular diathesis. The author describes a pneumonia of teething with which, we confess, we are unacquainted, "which," to use his own words, "being chronic and accompanied with general wasting but tumid abdomen, and with little cough, at first, is often mistaken for phthisis or mesenteric disease." The cause of atelectasis pulmonum, we are told, "is defective nerve energy from pressure," and its connection with bronchitis in infants is not alluded to. The author gives the astonishing explanation of diminished size of the affected side, after the absorption of a pleuritic effusion, to be "the increased work and consequent hypertrophy of the healthy lung."

Chapter eighth treats of the diseases of the food passages and of the abdominal organs. The classification of the diseases of the digestive organs lacks clearness, and we do not find that careful and thorough treatment that the importance of the subject would seem to demand. In the present state of medical science, it is a matter of some surprise to read that "gastro-malacia is one variety of dyspepsia," * * * "appearing to depend upon a diminished cohesion of the tissues, the result of slow starvation." In the section upon abdominal tumors, the author includes cancer of the stomach, making no mention of its extreme rarity in children, telling us that "it gives rise to greater dyspepsia than cancer of the liver, to hæmatemesis and to pain after every meal. Moreover, the percussion is tympanitic when the stomach is diseased, dull when the liver is affected."

Chapter ninth, the last and one of the longest in the book, contains general therapeutical hints and a very large formulary. The prescriptions have been made up with much care, and the few general therapeutical hints at the beginning of the chapter are good.

We have but space to allude simply to the frequency of typographical errors, which should not have found their way into a second edition.

The book, of medium size, is printed upon excellent white paper, the type clear and large. The chapters are well arranged and there is a good alphabetical index at the end of the book. In these respects, it fulfils the object of the author to make it a "handy book of reference upon a class of diseases, presenting peculiar difficulties and yet of the deepest interest because so continually met with in practice."

Parkes's Practical Hygiene, Fourth Edition. 1873. Reprint by Lindsay and Blakiston. Philadelphia.

This admirable treatise by Professor Parkes of the Army Medical School, Netley, England, was referred to in the "Report on Public Health" in this Journal, in February last. A new edition has since appeared, making the book even more valuable. The portions relating exclusively to military service are now placed by themselves, and the bulk of the volume is devoted to all that pertains to public and private health in the general population. It is a treasury of well authenticated observations, and presents the most complete discussion of the principles involved which has yet appeared in any language.

Every physician, who wishes to be able to give definite replies to the numerous questions referred to him as the guardian of the health of the people, should be able to consult this volume, and he need not fear that any special point, which may be in question, has been overlooked. Moreover, the foot notes and references will point to a complete library of hygiene.

Boards of Health will find this book almost indispensable to an intelligent exercise of their duty.

It is already supplied by our government to all army medical officers, and we wish that means could be found to make it accessible to all who seek information concerning the means of preserving the health of cities and towns.

G. D.

Treatment of Enuresis. By Dr. Buyelmann, of Cologne.—The author was induced by an article in the *Berlin. Klin. Wochenschrift*, 1871, No. 5, to try the syrup. ferri iodidi in a severe case of incontinentia urinæ. The patient was a young girl, thirteen years old, of nervous temperament and anæmic. The principal complaint was the incontinence of urine, so severe as to prevent her from walking any distance from her home without wetting herself. In addition to generous diet, she took, for three weeks, syrup. ferri iodidi, seven grammes ad aquæ, syrup. simp., āā, fifty grammes; a teaspoonful every two hours. After a week's treatment, there was a marked improvement, and, in two weeks more, she was discharged well.—*Berlin Klin. Wochenschrift*, No. 6.

Boston Medical and Surgical Journal.

Boston: Thursday, October 16, 1873.

Nothing has of late afforded us so much satisfaction as the raid of the United States authorities on certain persons circulating indecent literature.

The largest operator, apparently, is a certain Hunter, who represents various companies, and had offices in Hinsdale, Brattleborough, and Springfield. The others are quacks from the neighborhood of Court street. The Sawyer woman obtained bail, but the rest are in jail and will be tried shortly. We hope that a severe example will be made, for the evil is increasing, and is one which demands to be publicly condemned. Any leniency would be an insult to the self-respect of the community, and perhaps an injury to thousands yet unborn.

The attempt on the part of certain members of the City Council to establish a permanent smallpox hospital on the site in Swett Street, which the city purchased a year ago, is a proceeding which we strongly condemn as open to the gravest sanitary objections. The surroundings of this locality are such that it would be cruel, if not criminal, recklessness to compel patients sick with smallpox to be isolated there. The cases of typhoid which occurred among the convalescents there the past season, are significant as evidence of the insalubrious character of this region, even if this were not perfectly apparent to any one on the most superficial inspection. We feel confident that the Board of Health will have the support of all intelligent physicians in opposition to a scheme so obviously objectionable.

The epidemic of yellow fever is still raging in the west. The details supplied by the telegraph, though not full, show that there has been great mortality and much suffering. The Howard Association appears to be doing good service. We are happy to learn that, at Shreveport, the worst is past, and that no one of sixty-three physicians sent thither has taken the fever. The epidemic is now most severe at Memphis. One of the most painful features is the number of young orphans left destitute. We hope that generous aid will come from more fortunate cities.

Boston Dispensary.—The annual meeting of the managers of the Boston Dispensary has been held since our last issue ; it seems, therefore, a proper time to notice some of the changes that have taken place in that institution during the year that has just closed.

Owing to a great increase in the duties devolving on the city physician, Dr. Green felt himself obliged early in the year to resign the position of superintendent of the dispensary, an office which he had filled with great credit to himself and with great advantage to the institution for many years. Dr. A. L. Haskins was chosen his successor. Soon after his appointment, a number of changes in the practical workings of the dispensary were recommended by him to the directors, and at once received their approval.

The apothecary store is now open for the dispensing of medicine and the receiving of orders, from eight in the morning till seven in the evening. The women's room, heretofore over-crowded, has been divided into two rooms, and, consequently, it was found necessary to add four additional medical officers to the present staff. These vacancies have been filled by the election of Drs. T. W. Fisher, T. Dwight, Jr., R. H. Fitz and J. L. Hale. The last two named, were, till now, on the list of district physicians, and their places have been filled by the appointment of Drs. J. P. Oliver and A. L. Mason.

A special department for the treatment of skin diseases has been created and placed under the care of Dr. F. B. Greenough, whose place on the list of surgeons has been filled by the appointment of Dr. Thos. B. Curtis, who has recently returned from Europe. Another department has been opened for the treatment of nervous diseases, and placed under the care of Drs. S. G. Webber and D. F. Lincoln. A dental department has also been arranged, and patients are treated daily from 10 to 11. This department is under the care of Drs. Chas. S. Bartlett, E. P. Bradbury, J. W. Keyes, T. O. Loveland and F. M. Robinson. The rooms have been so arranged as to give a waiting-room for each department. The north-end district has been divided, and Dr. Walter Channing, Jr., has been appointed to the new district. In his annual report to the directors, Dr. Haskins has made a most urgent appeal for a new building, the present being utterly inadequate for the amount of work daily done in it. It is to be hoped that before another year closes the new building will be in the process of erection. The following is a complete list of the medical officers connected with the institution :—

Surgeons.—John Homans, M.D., J. B. Treadwell, M.D., S. W. Langmaid, M.D., T. B. Curtis, M.D.

Ophthalmic Surgeon.—O. F. Wadsworth, M.D.

Physicians.—J. M. Hayward, M.D., F. I. Knight, M.D., W. F. Munroe, M.D., C. E. Inches, M.D., J. F. Appell, M.D., R. Disbrow, M.D., T. Waterman, M.D., H. Tuck, M.D., W. H. H. Hastings, M.D., W. L. Richardson, M.D., W. E. Boardman, M.D., C. P. Putnam, M.D., T. W. Fisher, M.D,, T. Dwight, Jr., M.D, R. H. Fitz, M.D., J. L. Hale, M.D.

Department for Diseases of the Nervous System.—S. G. Webber, M.D., D. F. Lincoln. M.D.

Department for Skin Diseases.—F. B. Greenough, M.D.

Dental Department.—Chas. S. Bartlett, D.M.D., E. P. Bradbury, D.M.D., J. W. Keyes, D.M.D., T. O. Loveland, D.M.D., F. M. Robinson, D.M.D.

District Physicians.—1. J. B. Fulton, M.D. (East Boston.) 2. F. W. Vogel, M.D. 3. Walter Channing, Jr., M.D. 4. P. W. Page, M.D. 5. Jos. P. Oliver, M.D. 6. A. L. Mason, M.D. 7. B. F. Davenport, M.D. 8. J. H. Davenport, M.D. (So. Boston.)

Apothecary.—F. B. Winn.

Assistant Apothecary.—J. J. Kelley.

A. L. Haskins, M.D., *Superintendent.*

Clinical Lecture on the Relation which Faulty Closet-Accommodations bear to the Diseases of Women. By William Goodell, M.D.—The important question of sewage and cesspool diseases, which is now agitating political economists, has a range far wider than those branches of medicine on which I lecture. I shall, however, limit my remarks to that aspect of it which directly concerns the good health, and more remotely, the good morals of women, viz., *the relation which faulty closet-accommodations bear to the diseases of women.*

In adults, the state of health denotes a state of equilibrium between waste and repair,—between construction and destruction. But the statical condition is one necessarily disturbed by the smallest casting-weight. Hence, very slight indeed may be the cause which deranges the nicely-balanced relation between the functions of the various organs of the body. Thus, by the imperfect and unpunctual performance of the excretory functions, our food becomes our poison. The lengthened detention of fæces in the bowels, or of the urine in the bladder, begets a host of disorders, in man as well as in woman. But it is in the latter that they are most manifest. Irregularity or postponement in the evacuations of the body is perhaps the most common cause of uterine and pelvic diseases. For not only are local congestions produced mechanically by the irritation or the pressure from hardened fæces, and flexions of the womb brought about by the straining efforts to empty the bowels; but the intimate interdependence between the pelvic and the uterine plexus of veins on the one hand, and the portal system on the other, is at the root of all manner of female complaints. A congestion in the one determines in the other a like condition, which in turn confirms and augments the disorder of the former. It is, indeed, astonishing how quickly a woman's health declines from inattention to habits of regularity.

Over-distention of the bladder, by drawing up the cervix and by thrusting the fundus backward, is undoubtedly a very common factor in the production of retroflexions and retroversions of the womb. Almost every acute case of uterine displacement and many cases of vesical catarrh are thus brought about. The very worst case of irritable bladder that I ever met with, occurred in a lady who, thirty years previously, had travelled a whole day in a stage-coach without finding a fit opportunity for passing her water.

Again, costiveness is the recognized cause not only of hæmorrhoids, of pelvic and uterine congestions, and of disorders of the digestive apparatus, but also of fæcal poisoning. For, if diseases breed from bad drainage and defective sewerage from without the body, how how much more from bad drainage and defective sewerage within the body! Excretions retained in the body ferment and decompose; the pestilential gases thus generated, and the products of tissue-waste, being absorbed, degrade the blood, disable nerve-centres, and paralyze the action of the vital organs. A mischievous reciprocation takes place, by which the cause and its effects aid and abet one another. Take for instance the liver; costiveness makes it secrete less bile, and this torpidity not only causes a uterine congestion, but also reinforces the habit of constipation. So, in a measure, with every other organ; blood-disorder leads to morbid nutrition of nerve-centres, and this in turn still further degrades the blood. Thus is evoked that exaltation of nervous action which so often becomes turbulent and uncontrollable. Hysteria, chlorosis, and climacteric perturbations are always linked with defective hæmatosis.

Except as the result of this vicious circle, how else explain the proverbially bad health of women living in the country, and of the poorer classes of women in cities? Show me such a woman, and you show me a costive creature, one whose whole life is spent in an unnatural struggle with the lower but needful calls of her body. This evil is in itself bad enough; but, unfortunately, it does not end there. Upon the good health of the mother, depends the good health of the child. Feeble mothers beget feeble children—children who are carried from the womb to the grave, or who peak and pine under the heritage of ill health.

Such, then, being the condition of the majority of American women, what is the cause? "Probably no single cause," writes a close observer, "has had so much influence in producing the peculiarly delicate condition for which women living in the country and in the small towns in America are notorious, as the discomfort, inconvenience, and frequent repulsiveness [and, I may add, indecent exposure] of their closet-accommodations."

The ancients, who were wiser in their generation than we are in ours, set examples which we in the nineteenth century might in some respects usefully follow. The cloacæ of Rome are still the admiration of the architect. They were built so firmly as to have resisted the impetuous torrents of over seven hundred winters. To keep them in repair, public officers were appointed, who were called the *curatores cloacarum urbis*. Even a goddess—the fair Cloacina—was chosen to preside over them. But with us how different!

In the teeming tenement-house of any of our large cities, there is usually but one closet, and that invariably a cesspool, wet and foul, reeking with filth, poisoned by noisome stenches, defiled by lewd couplets or obscene cuts, indecent from thin partitions and wide chinks, or from being pre-occupied by one of the opposite sex. Under such conditions what woman can avoid schooling herself into the habit of resisting the evacuation of her bowels? In the small houses of tradesmen and of mechanics, the water-closet is rarely to be found; nor are the houses of the better classes supplied with this luxury. The privy is then usually placed at the farther end of the yard, and approached by a long and unsheltered path. It is, therefore, almost inaccessible in bad weather or in dark nights, and is overlooked by the back buildings of all the neighboring houses. To a delicate woman, the exposure to the weather is a serious inconvenience; to one who is menstruating, it is a constant menace; while to every refined woman the exposure to view offers but one of two choices,—either that of having her sense of modesty blunted, or that of waiting until nightfall before responding to the calls of nature.

Nor does the condition of the closets in the country present a more agreeable contrast. In many parts of the Southern and Western States, a clump of bushes, the shelter of a rock, the nearest grove, afford the only accommodations. But take the more thickly-settled States; where is the small farm-house whose privy invites rather than repels? The very name of *privy* is a misnomer. How seldom is the building hidden by clumps of evergreens or masked by any other disguise than that of a euphemism! How often is it not at an embarrassing distance from the house,—at the end of a long trail, or, at best, of a long and ill-kept path, which frequently runs parallel with a street or a road! How rarely is it ever provided with any other kind of window than round or crescent-shaped holes rudely cut out of the door! How commonly are the cracks dehiscent! The door itself is often without a bolt, often hanging by one hinge,—sometimes wholly unhung. Through the openings in the seat acrid blasts of wind sweep up as if impelled by some malignant demon. Now, add to all this the sickening stench, the conspicuous heaps of filth, the swarms of unclean flies, and confess that, despite the temerity of the description, the picture is not overdrawn.

Imagine now broad daylight with its busy traffic, a rainy day or dark night, the grass wet with dew or the ground covered with snow, or temperature, perchance, many degrees below zero. Under such circumstances, what woman can respond to the calls of nature without putting herself to great discomfort, to great risk indeed if she be menstruating, or without blunting the edge of her womanly sense of decorum?

Nor is this last phase of the subject the least important. The shrinking from publicity in the performance of these functions is neither "prudery" nor "false modesty," but a virtue of which our women may well be proud. In those countries where woman most disregards it, there is she least chaste, and there is the license of language least bridled. Whatever refines the body refines the mind, and *vice versâ*. The one reacts upon the other for better or for worse. Our forefathers, who scorned clothing and cleanliness, and who eased themselves, like their cattle, wherever the desire seized them, were in appetite little better than cannibals, in temper and morals lower than the brutes. When they began to wash themselves they began to clothe themselves; and after the culture of the body that of the mind followed as a matter of course. Thus soap becomes a great civilizer. "Show me," said the great Liebig,—or in words to this effect,—"Show me the nation which consumes the most soap, and you show me one which has reached the highest grade of civilization." So with regard to closets. "Show me," say I, "the nation that gives the most comfort, the most privacy, the most solicitation, to the evacuations of the body, and you show me, in refinement, in education, and in morality, the foremost people on the face of the earth."

I have told you the bane; now, what is the antidote? Clearly, *such closets as invite rather than repel*,—closets in which an operation of the bowels is not tantamount to being buffeted of Satan for a season. In cities, and in such towns as are supplied with water-works and good drains, the use of the water-closet ought to become universal. In the country, where such a luxury can be attained by the rich alone, the earth-closet is the only substitute; and I cannot too strongly urge you to advise its use among your patients and neighbors. Set the example by using one yourselves ; you will soon get back more than its money's worth of comfort, health and privacy.

Although, at my request, this gentleman has kindly consented to exhibit to you the mechanism of this earth-closet, yet I am not the advocate of his patent, or any one of the patents now in the market. You must select the one which seems to you to meet best all the requirements. I am contending simply for the principle on which these earth-closets are based, and for the moral and hygienic advantages which they offer. A portable closet, like this one, not larger than an old-fashioned arm-chair, can be moved about from room to room, or be put where it will be both private and accessible. Nor will its presence poison the surrounding air, for there is no better disinfectant, no better deodorizer of organic refuse, than the dry earth contained in its hopper. Recognizing this property of earth, and also the laws of health, a wise Deity has, as the Creator, implanted in carnivorous animals the instinct of burying their excrement. As the great Lawgiver, he commanded the Jews to do the same thing. What cats and dogs do by instinct, man should do as well by reason as by divine command. Further: animal refuse thus treated becomes a rich and available manure. Like that fabled giant of ancient mythology, it gains strength and vigor from contact with its mother, earth.—*Philadelphia Medical Times.*

INTRAVAGINAL AUSCULTATION.—A paper has been recently read before the Academy of Bologna by Dr. Verardini, illustrating the application of intravaginal auscultation as an aid to the diagnosis of pregnancy. The instrument employed for this examination is called the vaginal stethoscope. The possibility of this method of auscultation was first pointed out by Maygrier in the year 1825, while its first practical application was made by Nauke four years later, it being employed then to determine the existence of placenta prævia as well as pregnancy. Dr. Verardini maintains that internal or intravaginal auscultation is of great value in diagnosticating pregnancy even in the first month, inasmuch as the stethoscope, when applied to the neck of the uterus, transmits a characteristic sound, described as a faint, prolonged murmur. This sound is readily distinguishable from the utero-placental murmur, which accompanies violent contact of the fœtus with the walls of the uterus. The latter sound is faint and short, resembling that given by the stethoscope when applied to aneurismal tumors, or to the large arteries, and when once heard can never afterwards be mistaken.

It is, of course, essential to determine at the outset whether any pulsating tumor or enlarged bloodvessel is situated near the neck of the uterus.

Where other indications of pregnancy have been obtained, and yet the above described murmur cannot be obtained, in that case the diagnosis will, of course, be doubtful, and there will be strong grounds for suspecting that some disease of the uterus is present.

In many instances, it will sooner or later transpire that some disease of the ovum has involved the death of the embryo or fœtus.

HOMŒOPATHIC PILULES PROVED A SHAM.—The *London Practitioner* for April, 1873, gives account of recent examinations, by chemical analysis, of some of the more commonly-used homœopathic pilules. The average weight of each was 0.6 grains; and, in the strength known as the second dilution, should contain 0.00006 of a grain of the drug. This quantity, in the case of the drug chosen, is fairly within the reach of analysis. The third dilution places the drug beyond the reach of analysis.

In *sulphate of copper pilules*, no copper could be detected in a sample of 100 pilules, nor in another sample of 200 pilules. As little as 0.0001 grain would have been detected, if present, and in these samples there should have been 0.006 gr. in the first, and 0.012 grain in the second.

In 200 *corrosive sublimate pilules*, less than 0.0005 gr. was found, whereas 0.012 grain should have been present.

No strychnine or atropine could be detected in 300 *nux vomica* and *belladonna pilules* respectively, though the tests are of extreme delicacy.

The pilules were from two leading homœopathic pharmacists.

Of course there cannot be any effect from the taking of such pilules, except what is due to imagination.

Correspondence.

BROMIDE OF POTASSIUM.—LARGE DOSES AND SMALL.

MESSRS. EDITORS,—While reading Anstie's capital work on Neuralgia, lately, I came, on page 242, to the following paragraph:—"Having decided that bromide of potassium is the proper remedy, we must use it in sufficient doses. Not even epilepsy itself requires more decidedly that bromide, to be useful, shall be given in large doses. It is right to commence with moderate ones (ten to fifteen grains), because we can never tell, beforehand, that our patient is not one of those peculiar subjects in whom that very disagreeable phenomenon—bromic acne—will follow the use of large doses. But we must not expect good results till we reach something like ninety grains daily."

I have frequently seen it insisted that large, even very large, doses of the bromide were necessary for the control of neuralgia. But I feel myself constrained—although with diffidence—to enter my protest against this dictum. A large proportion of neuralgic cases are developed in enfeebled constitutions, where full depressants cannot be otherwise than injurious. In fact, Dr. Anstie himself recognizes, more fully than any other author I know, the great advantages of a full, generous diet, and even cod-liver oil. In such cases, I believe that the beneficial results of the bromides may be obtained with very small doses. If so, anything larger is, of course, superfluous, and therefore positively injurious. I have had many neuralgic cases, in persons of middle age and onwards, as well as some younger ones who were in an anæmic condition, who derived the best benefit from five-, six-, and eight-grain doses, repeated four times daily, persistently, for weeks. And, in several instances, I came *down* to these doses, finding that they derived as much benefit as they had previously done from larger ones. For I believe in the principle of employing the smallest possible dose to secure the desired effect. In other cases—of this class, remember!—having begun with small doses, and being impatient of tardy results, I have increased them; but, almost invariably, I have repented my impatience (on getting no additional benefit), and have gone back. And, in at least two or three cases, the comparative results have been so marked as to lead patients to point out to me the advantage of small doses. Even granting that they were intelligent people, such observation is remarkable, and must count for something. I therefore beg that, for this class of neuralgics, small doses of the bromides may have a fair and patient trial, and I thoroughly believe that they will bring to the physician increased satisfaction, and to the patient increased benefit.

ALEXANDER R. BECKER, M.D.

DOWN EAST, Sept. 25th, 1873.

MESSRS. EDITORS,—The summer has gone at last, and the last of our city visitors has gone home. One has somewhat less to do in haste, by night, in the village. Green apples don't hurt country boys so much as they do city boys, and one is not so frequently called to the country boy with cholera morbus. Then, again, our population has fallen off about a third. These things considered, it isn't strange that I should think a little about the differences in practising among the different classes.

Down at the principal tavern, hotel we call it now, there have been very many ladies from New York, Boston and Philadelphia. Several of these, I noticed repeatedly as having what I called *acne* on their chins. Two of them, sisters, had it upon their cheeks also. After exposure to the sun, their faces became inflamed, and I was asked to look at them. They, and their mother, started with horror when I told them that they were not careful to wash their faces thoroughly. It seems that a large proportion of ladies in good society don't wash their faces. When I say "don't wash," I do not mean that they never use water; but they never use soap and water. Now you can't make a clean skin without both; and especially if you are applying some medicated wash to your skin every night at bed-time. The objection to soap with the water, I find to be, that its makes one's face shine, and everybody would notice it. Now, I tell these young ladies that our country girls wash their faces with soap, and generally keep clear of pimples. The difference appears to be this. The country girl has a clean face, which shines, without pimples, and so a stranger knows that she washes her face. The city girl has a dirty face, with pimples, which don't shine, and the stranger knows that she don't wash her face. It's a matter of taste, perhaps, but I'd rather my girl should have a clean face.

I am very fond of tomatoes. They don't ripen here till very late, and I've been in the habit of sending down for them early. To my surprise, a lady was shocked this summer, because I advised her to eat tomatoes. "Tomatoes—why, they produce cancer." This was strange. I never knew it before. For thirty years, that I have been in practice, I have eaten them. I raise them in my own garden. I lay in a stock of canned ones from Boston every fall. And here, I've been feeding wife and children on this cancer-producing vegetable, summer and winter, for years. No signs of cancer yet, and I am going to try it a little longer.

Did you ever notice that many doctors think those things unwholesome which they don't like. "Veal is very bad, difficult of digestion," says one. "Mutton is very unwholesome," says another. I find both of these gentlemen eat roasted pork. Just so with some of their patients. Any bad feeling is put off upon some poor, unfortunate, innocent article of diet. That pain below is attributed to the boiled parsnip eaten at dinner-time. The frosted plum-cake and ice cream of 10, P.M., had nothing to do with it.

I remember, many years ago, you had an artist in Boston, whose name was Johnston, I think. He used to publish, annually, what he called "Scraps." One of these books had a picture of a steamboat scene. If I recollect rightly, it was called "Natural Cascades: Point Judith." A poor unfortunate, leaning over the rail, having a very distressed face, is represented as saying: "I very imprudently ate a little dry toast for supper, and it never did agree with me."

Wouldn't it be as well to take all the preliminaries into the account, in finding the reasons for different ailments? RUSTICUS.

Medical Miscellany.

DR. H. H. A. BEACH has been elected President of the Boylston Medical Society of Harvard University.

THE Connecticut River Valley Medical Association holds its October meeting at Brattleboro', Vt., Wednesday, Oct. 29th.

DR. O. F. WADSWORTH has been appointed ophthalmic surgeon to out-patients at the Massachusetts General Hospital.

THE BUSINESS OF SLAUGHTERING CATTLE, in private butchering establishments, in the midst of London, begins to be looked upon as a nuisance; and a committee of the House of Commons has been taking evidence concerning it, and has reported that slaughtering is a "noxious" business, which ought, with its allied industries, to be confined to centralized establishments away from thickly settled metropolitan districts.

THE SMALLEST ANGLE OF DISTINCT VISION.—Country Doctor's spider web has attracted much attention. We have received several replies, but as the ground is pretty well covered by "Mote," we do not publish them, though they are excellent. We hope our readers will observe how familiar a subject may furnish interesting and instructive debate, and will follow Country Doctor's example in communicating any similar observations they deem of interest.

THE *XIXe Siècle* relates of Dr. Nélaton that he was accustomed to say:—"If you have the misfortune to cut a carotid artery when performing an operation, remember that it takes two minutes for syncope to supervene, and as many more before death occurs. Now four minutes are four times the time required for a ligature, provided you don't hurry yourself—never hurry yourself." The *Temps* says:—"It is related that when he began his studies, he worked with such ardor that he often refused himself the time necessary for sleep. He procured a plank, some five or six feet long and forty centimetres broad, the extremities of which he placed on two chairs. He lay upon it, holding his book open above him. It is said that in this position the want of sleep is less readily felt. When, in spite of him, his eyes closed and the book fell, the shock disturbed his balance, and he followed the book. The shock aroused him, and he got up and begun his work again."

THE EPIDEMICS.—Many cases of sickness are reported in Davenport, caused by the use of cholera preventives when they were not necessary.

A young girl who was driven through the cholera-infected district of Davenport, and jokingly told that she would be sure to catch the disease, was attacked with cramps, collapse and discoloration, and died in a short time, a victim of the power of mind over matter.

"A strange and fatal disease, resembling fever," is reported at Kelton, in Utah. Persons die in a few hours after being attacked.—*Phil. Med. and Surg. Reporter.*

DURATION OF MENSTRUATION.—Some observations made by Dr. Cohnstein prove that the average duration of the menstrual function is thirty-one years—that in women who have menstruated early, before 13 years old, it lasts three years longer than in those who menstruated after 17. The regularity of menstruation seems to have no influence on its duration. Married women have a longer menstrual period than the unmarried, lasting from twenty-nine to thirty-four years, and amongst the pluriparæ the period is longest. The catamenial functions are longest with women who have menstruated early, who are married, who have had more than three children, who have nursed and have been last pregnant between 38 and 42 years of age.—*Dublin Medical Press and Circular.*

The Malady of the First Napoleon.—The following interesting letter, along with a lock of hair, has been recently discovered by Major Young, of Lincluden, Scotland, It was written to his father by Dr. Short, principal medical officer at St. Helena at the time of Napoleon's death. "St. Helena, 7th May, 1821. You will no doubt be much surprised to hear of Bonaparte's death; he expired on the 5th of May, after an illness of some standing. His disease was cancer in the stomach, that must have lasted some years, and been in a state of ulceration some months. I was in consultation and attendance several days, but he would not see strangers. I was officially introduced the moment he died. His face in death was the most beautiful I ever beheld, exhibiting softness and every good expression in the highest degree, and really seemed formed to conquer. The following day, I superintended the dissection of his body (at this time his countenance was much altered), which was done at his own request, to ascertain the exact seat of the disease (which he imagined to be where it was afterwards discovered to be), with the view of benefiting his son, who might inherit it. During the whole of his illness he never complained, and kept his character to the last. The disease being hereditary, his father having died of it, and his sister, the Princess Borghese being supposed to have it, proves to the world that climate and mode of life had no hand in it, and, contrary to the assertions of Drs. O'Meara and Stobo, his liver was perfectly sound; and had he been on the throne of France instead of an inhabitant of St. Helena, he would equally have suffered, as no earthly power could cure the disease when formed."—*British Medical Journal.*

NOTES AND QUERIES.

The English "arrest" outbreaks of fever by official visitation—e. g.:—"*Enteric fever,*" says the *London Lancet* of Sept. 20th, "has broken out in several parts of Birmingham. Another visit to the town by a Local Government Board inspector will probably be necessary."
Judæus.

Are there any of the Philadelphia University degrees existing in Boston? The questioner would like to see one.
Inquirer.

Castoria. Castor-Oil Capsules.—These articles have been extensively advertised. Will some correspondent of the Journal, who has used either of these articles, tell what he knows concerning them, including their manufacture?
Inquirer.

Died,—In this city, Oct. 7th, Wentworth H. Quigley, M.D., aged 31 years.—At Leipzig, September 8th, Professor Czermak.

Mortality in Massachusetts.—*Deaths in fifteen Cities and Towns for the week ending October* 4, 1873.

Boston, 159—Charlestown, 16—Worcester, 7—Lowell, 22—Milford, 4——Salem, 17—Lawrence, 16—Lynn, 12—Fitchburg, 4—Taunton, 1—Newburyport, 4—Somerville, 6—Fall River, 32—Haverhill, 7—Holyoke, 6. Total, 313.

Prevalent Diseases.—Consumption, 49—cholera infantum, 32—typhoid fever, 23—pneumonia, 18—scarlet fever, 14—dysentery and diarrhœa 14.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, Oct. 12th, 123. Males, 61; females, 62. Accident, 4—abscess, 1—apoplexy, 2—inflammation of the bowels, 2—disease of the bowels, 1—bronchitis, 1—inflammation of the brain, 1—disease of the brain, 4—cerebro-spinal meningitis, 2—cyanosis, 1—cancer, 2—cholera infantum, 12—consumption, 18—convulsions, 4—croup, 2—debility, 2—diarrhœa, 9—dropsy, 1—dropsy of the brain, 1—dysentery, 3—diphtheria, 1—erysipelas, 1—scarlet fever, 5—typhoid fever, 8—disease of the heart, 5—homicide, 1—disease of the liver, 3—congestion of the lungs, 1—inflammation of the lungs, 6—marasmus, 6—old age, 1—paralysis, 2—rheumatism, 1—tumor, 2—stricture of the urethra, 1—whooping cough, 1—unknown, 5.

Under 5 years of age, 48—between 5 and 20 years, 11—between 20 and 40 years, 30—between 40 and 60 years, 21—over 60 years, 13. Born in the United States, 86—Ireland, 25—other places, 12.

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Original Communications.

AN OPERATION TO RELIEVE OBSTRUCTION OF THE BOWELS BY A BAND. DEATH.

By DAVID W. CHEEVER, M.D.

SURGICAL interference to relieve intestinal stoppage, though often discussed, is rare. The history of the following case, though unfavorable in its result, contains some facts which may be of use in similar cases. To add to the experience of so unusual an operation, I conceive to be the duty of all.

J. Y., a little boy, seven years of age, was suddenly attacked, according to the parent's account. The symptoms were pain in the abdomen and obstinate constipation; followed by vomiting, tympanites and tenderness. A physician treated him at first for the constipation, with castor oil, large enemata, and other cathartics. The medicines were vomited; and nothing came from the rectum but the enemata.

On the fourth day of the sickness, he was seen by Dr. J. G. Blake. The symptoms were the same. Dr. Blake gave no cathartics, but a warm enema of two quarts, and hot fomentations to the abdomen. The following day he asked me to see him, with a view to using puncture to relieve the tympanites. The child was sitting up straining at stool, but nothing came from the rectum but a little clear serum. The belly was enormously distended; and a huge coil of intestine, supposed to be the colon, revealed itself in outline across the abdomen. There was general tenderness, but not very great. Not much retching. No tumor or hard spot was felt in the abdomen. The child's general condition was not so feeble as might have been expected.

Dec. 30, 1871.—He was taken to the hospital, and repeated punctures made into the distended intestine, with the aspirator. A good deal of foul gas came away. The abdomen relaxed; the child appeared relieved, and was able to retain nourishment. He was fed upon small quantities of milk and lime water, a little sherry, and opium. Hop-fomentations to abdomen.

Dec. 31.—He rested better last night, and retained his food. But to-day the abdomen has filled up again, and the distress from the distention has returned. The punctures were repeated with as good result as before. Treatment was continued the same.

Jan. 1, 1872.—A little worse; no relief to the bowels. Is kept a little under the influence of opium; retains his food. The question of an operation was mooted, but I was reluctant to undertake it.

Jan. 2.—The case had now reached the *eighth* day, since the attack. The child was obviously failing. Distention and distress great. No passages downwards of fluids, or flatus. It was clear that the obstruction was not to be relieved by ordinary measures. There was, however, as yet, none of the collapse which indicates mortification; nor were the symptoms of abdominal tenderness very acute. An unfavorable prognosis was given, and the parents were very urgent for an operation. Seconded as they were by medical advice, I consented to try this last expedient, without, however, holding out much hope to them.

Operation.—The child was etherized; and the abdomen opened by a vertical incision. The intestines were so distended that they concealed the cavity of the abdomen, and prevented any search for the stricture, through this incision. A cross incision was therefore made, and the abdomen explored with the hand. There was present a moderate degree of peritonitis. No effusion in the abdomen, either serous or fæcal. The puncture marks in the intestine were seen, closed up, without extravasation, or external redness. The obstruction was found in the ileum, just above the cœcum. The ileum was much distended above the point, but empty and collapsed below, and so was the large intestine. There was no invagination, or intussusception. The ileum was twisted and held by a band of adhesion which looked old. This was easily severed, and the bowel untwisted. Air immediately passed through, and there followed, at once, an enormous liquid and gaseous discharge *per anum.*

The abdomen was now closed as rapidly as possible, warmth applied and stimulants given. The abdomen was closed in the more readily, since the bowels sank down after the discharge.

The child did not rally, but died, in a state of collapse, after three hours.

The instructive points in this case are:—

1st. That when we open a tympanitic abdomen, we had better puncture the intestines with the aspirator, or we shall be obliged to make a crucial incision. There might, however, be more difficulty in promptly finding the obstruction, if we had not the distended bowel to guide us to the stricture.

2d. Punctures with the aspirator do not cause extravasation, or inflammation; neither do they afford permanent relief in tympanites.

3d. Immediate resumption of the peristaltic movement of the bowels, as soon as the stricture was relieved.

4th. The operation was done too late. Would it not be a hopeless proceeding at any rate? Has it ever succeeded? *Mr. Hutchinson*, of London, has recently opened the abdomen of a child, where the symptoms of intussusception were very marked, on the *tenth* day. He drew out the invaginated bowel, and the child recovered.

"For intussusception and strictures of the small intestine," says *Mr. Bryant*, in his "Practice of Surgery," "there is little to be said in favor of operative interference. The *cause* of the obstruction, in such cases, is within the intestines themselves, and not outside. But for *internal strangulations*, in which the bowel is obstructed by some solitary band, omental, mesenteric, or otherwise, the same cannot be said; for, granting that a diagnosis can be made, and its almost certainly fatal termination be accepted, the question of operation becomes a simple one—for the cause is without the bowel and remediable. Ought the operation to be attempted? or is the patient to be left to die unrelieved? I have no hesitation in giving it as my opinion, that an operation is justifiable, under these circumstances; but only when the diagnosis is fairly clear."

Dr. Brinton, in 600 cases of intestinal obstruction, found that 43 per cent. were from intussusception; 31 per cent. from bands; 17 from stricture, and 8 from torsion. In most of these, surgical relief could have been given.

The same authority estimates that obstructions of the intestines cause about 1 in 280 deaths from all diseases. In obstructions due to bands, the small intestine is the seat of the trouble in 94 per cent. of the cases. But in obstruction, due to organic strictures or tumors, the large intestine is the seat in 87 per cent. of the cases. In intussusceptions, the ileac, or ileo-cæcal give 84 per cent. of all. This is an affection more peculiarly of infancy and childhood. It is well known, also, that invaginations are very frequently found after death in young subjects, without having given rise to fatal symptoms. They are probably temporary, and become disentangled. Of 300 children examined by *Louis*, the greater number had two or three *volvuli*, without inflammation, and there was no history of symptoms during life. *Rokitansky* considers them produced in the death-struggle, or the *rigor mortis*.

The question of differential diagnosis between bands and invagination is important in reference to the trial of operative interference. The difference is often clearly marked, but not always. *Dr. Fagge*[*] gives the following symptoms of *band*:—"The sudden and definite onset of the illness; the occurrence of collapse at its beginning; an early age; the severity of the pain, generally referred to the umbilicus; the absence of precursory symptoms; the absence of tumor, hæmorrhage, or dysenteric symptoms, such as are seen in intussusception; and the absence of the intensity and rapidity of the acute form of volvulus."

Mr. Gay[†] has collected 148 cases of strangulation by band. In band, vomiting is constant; in intussusception, it often ceases. In band, constipation is the rule; in invagination, diarrhœa, bloody and mucous stools. In band, abdominal distention is an early symptom; in intussusception, it may never exist. In the latter, a distinct tumor may be felt. In both, opium should be freely given.

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[*] Guy's Hospital Reports, 1868.

[†] Transactions of the Medical Society of London. 1861–2.

In intussusception, the proper treatment appears to be *inflation*, which has sometimes succeeded; and an operation may be a final resort.

In band, we can have no resource but an operation. It is an internal strangulation like a hernia, hopeless unless the stricture can be removed.

Abdominal surgery has been so far advanced in comparative safety by the experience of ovariotomists, that *Dr. Otis*, in the exhaustive History of the Surgery of our late War, ventures to predict, that in gun-shot wounds of the abdomen, with pressing symptoms, the practice of abdominal section, search for the ball and prevention of extravasation may eventually become common, and more successful than the fatal inactivity now the rule. In like manner may we not look forward to an increasing percentage of recoveries in operations to relieve intestinal obstructions—a ratio of success comparative to our early and accurate diagnosis?

In a case of such hopeless nature, it is painful to any physician of sensibility to stand by and do nothing, when an examination, *post-mortem*, reveals the cause of death to be purely *mechanical*, and capable of relief from a touch of the finger, could it have been rightly applied.

TREATMENT OF CONGENITAL ATELECTASIS PULMONUM BY STEAM.—The author considers the greatest danger for the life of the new-born infant to be the lowering of the temperature of the body, caused by incomplete decarbonization of the blood and by bronchial catarrh. This danger, according to the author, can be removed by the application of external warmth by making the temperature of the air inspired sufficiently high. The air, however, must be moist, which can be most easily effected by placing the child in a steam bath, a tent being made with blankets, and steam developed underneath it by means of a vessel containing boiling water which must be often renewed; or, by means of a boiling apparatus so arranged as to keep the temperature 26–27° C.; at the same time, care must be taken that there be always sufficient circulation of air therein. The temperature of the bath should, for the first days, not be allowed to go below 25° C., and at no time go above 30°. As to length of time to keep the child in the bath, this depends upon the severity of the case; sometimes as many as 8–14 days are required. The temperature is to be gradually diminished, and the child to become accustomed to the temperature of the room which should at no time be a very low one. The author claims to have seen very good results from this treatment.—*Allgem. Med. Central Zeitung.*

Progress in Medicine.

REPORT ON PATHOLOGY AND PATHOLOGICAL ANATOMY.

By R. H. Fitz, M.D.

[Concluded from p. 383.]

The term *desquamative pneumonia* may represent three degrees. The lowest degree appears in severe general diseases as a *consecutive desquamative pneumonia*, under those conditions where parenchymatous alterations of the heart, liver, kidneys, &c., occur, and might, in like manner, be called parenchymatous pneumonia.

It is generally double, diffuse, lobar, affects the bronchi secondarily, and may be found in the anterior and upper parts of the lungs as well as in the posterior and lower portions. If tolerably general and distinct, the lungs are enlarged, filled with blood, with isolated, punctate sub-pleural and parenchymatous extravasations. They are œdematous, and do not collapse, barely even on section. Serum, containing minute air-bubbles, flows from the cut surface, and delicate elevations are presented, the projecting walls of the empty alveoli. The tissue is flaccid and friable. With the microscope, one finds abundant alveolar epithelium, swollen, rounded, finely granular, the granules in part protein, in part fat, the latter rapidly predominating. From the condition of the epithelium, arises the term, such being entirely analogous to the changes occurring in the consecutive parenchymatous nephritis. Pus corpuscles are rarely found; they then arise from the co-incident catarrhal bronchiolitis. Pleurisy is absent, and there are no fibrinous plugs. A speedy or protracted convalescence may occur; likewise death.

In protracted convalescence, a chronic fatty degeneration of the epithelium occurs. Acute atrophy of the lungs may also take place, when "the pleura is not adherent, and there is a complete absence of air in the pulmonary tissue, an unusual laxity, with extensive moisture, a smooth surface on section, a brownish-red color mixed with gray, a more or less dense consistency, cylindrical dilatation and approximation of the acartilaginous bronchi, with livid redness of their mucous membrane."

A special form of parenchymatous pneumonia is that where the exudation follows the course of the interlobular and sub-pleural lymph vessels, distinguished from desquamative pneumonia in that its course is accompanied by pus formation. This process is most frequently seen in pyæmic, new-born infants, infected by the mother suffering from puerperal fever. It also occurs in adults dying with pyæmia not dependent upon embolism.

Another degree is primary, *genuine desquamative pneumonia*. Its relation to the consecutive form is analogous to true Bright's disease, as compared with the renal affections occurring in some general disease. It is generally seen at an advanced period (four to six weeks or later), and is usually more fully developed in the upper parts, advancing downwards. In cases of six or eight weeks' duration, the volume and weight of the diseased lungs or lobes are considerably increased, the surface smooth, dull, covered with cuticular fibrine or united by organized adhesions. The pleura is swollen, presenting here and there ecchymoses, especially over the lower lobes. The lungs do not collapse, even on section; the elasticity is diminished or absent. The friability is increased, even to diffused softening. The cut surface shows the lobar diffuse expansion of the alteration, a more or less diminished, in parts even complete absence of air, and a feeble granulation. The last condition is due to the thickened inter-alveolar parenchyma. Considerable blood is present. The longer the process has persisted, the greater the abundance of granular pigment, whereby the tissue is slaty-gray or black. On scraping the surface, a slight amount of gelatinous fluid is obtained, bloody and opaque from the presence of numerous cell elements. Under the microscope, one finds exfoliated epithelium from the alveoli and bronchi, fatty degenerated, often containing brown or black pigment. Neither pus, mucus, nor coagula are present. The expectoration, even in the first week, is characteristic; that, too, where the symptoms might suggest croupous pneumonia. One finds abundant alveolar epithelium, with occasional ciliated epithelium. The longer the duration of the disease, the greater the abundance of the epithelium, granular and pigmented corpuscles. Free fat granules and free nuclei are also present. Later, the alveolar epithelium undergoes a myeline degeneration. The enlarged, rounded cells become granular corpuscles, the granules being dull, their outlines indistinct, the cells appearing as pale, clear bodies. The pulmonary epithelium shows nuclear proliferation, with newly formed cells of various size and shape. In croupous pneumonia, such a degeneration occurs towards recovery. Stellate and spindle cells are also obtained from the cut surface. The pigment is often extremely abundant. The alveolar framework is thickened by the new formation of tissue.

Though this disease is generally fatal, it is not always so. Complete recovery may take place. A protracted course may be accompanied by chronic fatty degeneration of the epithelium, in one case extending over a year when death occurred, the clinical symptoms of pulmonary phthisis being present.

A second result of genuine desquamative pneumonia is cirrhosis of the lungs. In this case, the development of the pulmonary connective tissue predominates by far over the superficial epithelial alterations. The term is applied when the connective tissue appears "as fibrous cicatrices or tumors, in which the alveolar parenchyma and the minutest bronchi are enclosed, obliterated and destroyed." At times, muscular cells predominate to such a degree as to demand the term muscular cirrhosis. This connective tissue may be pigmented, or gray and translucent; in the latter instance, generally combined with the preceding form. These cirrhotic nodules may become ossified.

Cheesy pneumonia is a result of the genuine desquamative pneumonia, and is the highest degree of the same, terminating in necrosis, and is acute, subacute or chronic. The cause of the frequency of cheesy pneumonia is found in a proliferation of peri-arterial tissue, in addition to the development of embryonal tissue in the purer forms of genuine desquamative pneumonia. In the subacute and chronic forms, one finds evidence of retrograde or final processes, either a return to the normal condition in the desquamative portions or cirrhosis, chronic fatty degeneration and the formation of cavities. As peri-bronchitis is seated in the adventitia of the acartilaginous finer and finest bronchi, it deserves the term peri-bronchiolitis. There is a simple form, without the production of pus, and a purulent form accompanied by such.

Though the tubercle belongs to the lymph system, and is analogous to a lymphoid organ, it represents a peculiar sort of lymphoid formation, in that the protoplasm of its giant cells becomes firm, the substance cementing the nuclei becomes carnified, its connective tissue periphery becomes fibroid. Regarding the connective tissue cells as the forerunners of fibrillary connective tissue, and of undeveloped endothelium, a special irritament stimulates them to produce the giant cells, and hence the remaining constituents of the tubercular lymphoma. Thus the tubercle may develope from the connective tissue cells (Langhans) and the endothelium (Rindfleisch, Klebs). The tubercle may become entirely absorbed. Small tuberculous cavities may follow the cheesy degeneration of tubercles; calcification may also occur. The seat of the tubercle is always wherever connective tissue lymph vessels and small arteries, with lymphatic sheaths, are present, and therefore exists in the inner fibrous layer of the mucous membrane of the larger bronchi, in the wall of the bronchioles and in the interlobular connective tissue of the lungs, even in the walls of the alveoli. The acute miliary tubercle of the lungs is, clinically, essentially a local disease, a desquamative pneumonia, distinguished from the pure form only by the fact that giant cells appear beneath the proliferating epithelium of the alveolar walls; therewith the tubercle, from the beginning, attains the interior of the alveolus, and, later, through local infection, miliary tubercles may become developed in the swollen frame-work, provided with formative connective tissue elements. Miliary tuberculosis is always acute, advances not only from the apex downwards, but from the alveolar parenchyma towards the bronchioles. This peculiarity belongs to desquamative pneumonia also, and is equally true of the parenchymatous affection, whether tubercles are developed in it or not. Almost always an acute, punctate, cheesy, lobular pneumonia developes in the nearest alveoli; hence the larger yellow miliary tubercles of the lungs are tuberculous lymphomata, with central degeneration, surrounded by degenerating and degenerated desquamated epithelium of the neighboring alveoli. This condition is a subacute miliary tuberculosis. The chronic form is the result of the acute, when retrograde changes in the entire pulmonary parenchyma occur, in addition to the punctate caseation.

Hence, a peribronchitis nodosa is a chronic miliary tuberculosis. In fact, there is no other tuberculosis of the lungs than the acute miliary form, which may extend by numerous acute secondary growths. A secondary capillary bronchitis may occur, but not always. It may be so slight that cough is absent. If this be present, microscopic examination of the sputum will present characteristic evidence.

The theory that miliary tuberculosis is a specific disease, is based upon the fact that a cheesy deposit is almost always present in the body. This cheesy deposit originates from earlier completed inflammatory conditions. It must not be completely encapsuled, surrounded by firm fibroid tissue.

The presence of tubercles in the immediate vicinity of the nodule (infectious through vicinity), as well as the simultaneous appearance of the miliary tubercles in the various organs.

The seat of the miliary tubercles in the connective tissue containing lymph vessels.

The analogy of the histological structure with that of the normal lymphoid organs, even in the physiological condition (not functional) which calls them into life.

Tuberculosis, as an infectious disease, is not single (miliary carcinosis).

The immediate inoculability from one human being to another (not inheritance).

Tuberculosis, as a rule, does not occur in company with other infectious diseases.

Finally, the results of the inoculation of animals.

Acute miliary tuberculosis is co-existent with desquamative pneumonia, not necessarily cause or result of the inflammation. It is, locally considered, an inflammation, with the development of tubercles, and the tubercular lymphomata may be found in cheesy cellular infiltration.

Only those inflammations should be called tubercular which bear, not accidentally, but inherently and necessarily, the condition of producing tubercular lymphomata, simultaneously with the appearance of the inflammation, which, however, remains limited to the corresponding inflamed portions of tissue. Hence, of the various inflammations of the lungs, the cheesy pneumonia alone deserves the name of tubercular inflammation.

Tubercular pneumonia is primary, acute; miliary tuberculosis is secondary, infectious. The former is a constitutional disease, hereditary, and a tuberculous inflammation may occur in almost all the tissues and organs of the body. The person with a tuberculous constitution is one whose organic activity has a tendency to respond to slight irritation by an inflammatory exudation unusually rich in cells. The irritament is constitutional, not infectious, as in miliary tuberculosis, and the tubercular pneumonia is merely an enhancement of the genuine desquamative pneumonia. This exudation must have a tendency to caseation.

Under pulmonary phthisis, is comprehended the advancing destruction of the respiratory organs, and, more particularly, the decay and emaciation of the body, caused by such an encroaching lung disease. The causes are, first and foremost, parenchymatous or desquamative pneumonia, allied to which are the peri-bronchitic inflammations.

Regarding acute miliary tuberculosis as a form of phthisis, it would be an infectious phthisis. Tuberculous pneumonia would be an inflammatory phthisis. Infectious and inflammatory phthisis are both embraced under the term pulmonary consumption, for the desquamative pneumonia is common to both. Both are distinguished from each other in that the infectious phthisis never creates destruction, while the inflammatory form seldom advances without ulceration. Pulmonary consumption is either primarily inflammatory or secondarily infectious. Only the primary, inflammatory form is constitutional; the latter runs an acute or chronic course.

The individual constitution is merely one factor in the development of phthisis; it is phthisis latent. External causes must also be present; the effect must be parenchymatous irritation and inflammation of the respiratory organs.

Catarrhal and croupous pneumonia and chronic bronchial catarrh do not lead to phthisis. Catarrhal affections of the pulmonary organs become more frequent as one leaves the tropics for the higher latitudes ; at the same time, the northernmost parts of the earth possess a certain immunity from phthisis. On the contrary, the tropics show the greatest frequency and the greatest rapidity in its course. So with regard to elevation. High table lands and mountains are the homes of catarrh and bronchitis, while a height of 2000 feet above the sea level forms the limit for the occurrence of phthisis. As regards the atmospheric influence, the temperature of the air and moisture play the most important parts. Sudden, extreme and frequent changes of temperature prevent compensation on the part of the body. Hence, the temperature of the air and its rapid changes must be regarded as the occasional causes of inflammatory phthisis, and in most regions where phthisis is prevalent there is a high degree of moisture.

Friedländer's investigations are experimental, a pneumonia being produced by section of the vagi (Traube), as a result of which the buccal fluids enters the lungs. An acute inflammation of the lungs follows, with a regular typical course. Examination with the microscope, six hours after the experiment, shows a grumous or thread-like mass filling the alveoli, containing more or less white blood corpuscles ; in addition, granular corpuscles, at times containing pigment. These cells differ from those arising from the bronchial wall, and are regarded as arising from the normal epithelium of the alveolar wall, these having become more granular, thicker, and finally detached. An examination made nine hours after the experiment, shows that the fibrous wall of the alveolus remains intact ; the interstitial tissue surrounding the vessels and bronchi is thickened, from the presence of numerous lymphoid cells. Upon the alveolar wall, in addition to the granulo-fibrillary material, the swollen epithelium and red blood corpuscles, are found numerous lymphoid cells, with double or multiple round nuclei. The accumulation of lymphoid cells in the bloodvessels of the affected part is extreme, and, later, the alveoli are almost completely filled with lymphoid cells, which are surrounded by a continuous alveolar epithelium. A hyperæmia and sero-hæmorrhagic exudation in the alveoli takes place, then the presence of numerous lymphoid cells in the blood-vessels, interstitial tissue and in the alveolar cavities; the epithelium of the latter first swells in the transuded serum, afterwards undergoes fatty degeneration without taking an active part in the inflammatory process. This form of pneumonia differs from the fibrinous, croupous form, but is analogous to the catarrhal pneumonia of children.

In an appendix, the author refers to the publication of Buhl, whose theory of the pathology of desquamative pneumonia differs so widely. He opposes the view of the latter with regard to the endothelial nature of the alveolar epithelium, and maintains that the same is not to be considered as endothelium, but as a direct continuation of the bronchial epithelium. He also opposes the idea that the lymphoid cells are present in the alveoli through aspiration from the bronchioles, but re-asserts that they occur primarily in the alveoli. He considers that the desquamative pneumonia of Buhl is rather the œdematous condition of the epithelium, in connection with which there is no active participation of the interstitial tissue.

Reports of Medical Societies.

THE BOSTON SOCIETY OF MEDICAL SCIENCES. EDWARD WIGGLESWORTH, JR., M.D., SECRETARY.

MARCH 25th, 1873.—The society met at the house of Dr. Wadsworth, Dr. Warren in the chair.

Dr. Dwight read a paper upon "The action of the intercostal muscles."

Dr. White showed, under the microscope, at the January meeting of the society, some hairs from a patch of tinea tonsurans upon the head of a young girl. The disease at that time had lasted some months. Since the last meeting, the girl's grandfather had applied to him for treatment on account of a thickened and diseased condition of the finger nails, which presented the appearances usually produced by a fungus, and showed, under the microscope, myceloid growths and spores of tinea tonsurans. In this case, the nails had been affected for years, and it is probable that the disease was by him communicated to the young girl. It has been attempted to cultivate these spores from the nails, as in the case of favus, but the original form has not been discovered. The elements vary somewhat from those in the hair or upon the skin.

Dr. Webber spoke of two cases in which he had recently examined the spinal cord and nerves, where amputation of the arms had been performed during life.

April 19, 1873.—The society met at the house of Dr. Homans, Dr. Richardson in the chair.

Dr. Wadsworth spoke of a recent discovery of Max Schultze, tending strongly to confirm theories previously advanced by him as to the special function of the cones in the rod and cone layer of the retina, and of the yellow pigment in the macula lutea. The cones alone take part in the perception of color. In man and in the day-monkeys, in the central part of the retina, only cones are present, and there is some yellowish pigment in the anterior layers. Night-birds and other night-animals have few or no cones in the retina. In day-birds, the cones are present. The theory is, that the yellow pigment acts by cutting off rays from the violet end of the spectrum; also some of the red, rendering the rays more achromatic which meet behind it. Schultze examined recently the fresh retina of a Brazilian night-ape and found, in accordance with the above theory, no yellow pigment and no cones in the retina.

Dr. Jeffries added that Schultze says also that the owl has very few cones, the retina being almost entirely composed of long delicate rods. Day-birds have cones but almost no rods, and the ruby red and yellow drops of pigment in the cones are strongly marked. They have one or two foveæ. In 1866, Schultze spoke of apes which alone have yellow spots, as in man. The intensity of the yellow spot is a cause of color blindness; a person may be violet blind from excess of yellow pigment. Dr. Jeffries had noticed in eyes removed for sympathetic ophthalmia a difference in the amount of pigment in the macula, not in relation simply with the amount of pigment in the choroid. The yellow spot is to be expected in the negro or mulatto, but would excite attention if more strongly marked in a white person. This amount of yellow pigment would, of course, also affect all mixed colors containing violet.

Dr. Wadsworth stated that violet blindness at the central point of vision had been long observed. It was first pointed out by Herschell, that in looking at a number of small stars together, one is observed best by looking at its neighbor. Schultze says, one sees blue better by looking a little to one side, because the yellow pigment diminishes more rapidly than the acuteness of vision does, as we go away from the central point.

Dr. Jeffries remarked that, if one looks at the spectroscopic colors, one sees a violet color farther along than where one is looking, i.e., the spectrum appears longer by not looking at but by it, the yellow of the macula causing the blindness. Dr. Jeffries then spoke of a case where yellow sight occurred within an hour after the administration of two grains of santonine. Virchow and Von Graefe report no case from so small a dose. Schultze speaks of it after five grains. Here it occurred after two grains and was observed several times.

Dr. Bowditch spoke of the origin of sugar in diabetes. Where the sugar is more abundant after meals, it is due to too great formation of sugar in the liver, the organ diseased. The glycogen in the liver may be made to disappear, at least in the lower animals, by means of a meat diet. In other cases, the amount of sugar is uniform through the twenty-four hours disregarding diet, and shows functional trouble in the muscles where albuminoid food is split up and makes glycogen, and the nitrogenous makes urea. In these cases, the patient is weak; not so in the former cases. The latter kind is also more and sooner fatal than the former. Dr. Bowditch inquired if these two kinds were recognized.

Dr. Jeffries, recurring once more to yellow vision, said that at this season the green boughs would stand out as when seen in a stereoscope, if looked at through yellow glass. The glass, of a pale sherry color is the best. This may be used also in picture galleries by day, not by gas-light.

Dr. Wadsworth had been able to get the stereoscopic effect by simply looking steadily at the landscape, the trees in the foreground standing out.

Dr. Jeffries thought this rather a question of accommodation, and stated that the glass gave much better results.

Dr. Wadsworth thought any other colored glass might give similar results; the yellow glass makes the eye achromatic and defines more sharply.

Dr. James asked if the glass must be colored throughout its entire thickness. Dr. Jeffries said this was preferable.

Dr. Quincy next showed and explained examples of the Albert-type process.

May 27th, 1873.—The society met at the house of Dr. Wadsworth, Dr. Green in the chair.

Dr. Wadsworth showed, under the microscope, sections of the fovea from a normal retina. He explained, by means of drawings upon the blackboard, the minute structure of the retina, especially at the fovea. Dr. James inquired if the fibres connecting the two granular layers were nervous or connective tissue. Dr. Wadsworth said this was not certainly known.

Dr. Jeffries spoke of the breaking off of the pigment from the rods and cones going to prove that it was retinal; also, of a tumor occupying the place of the choroid, but being really a white sarcoma.

Dr. Wadsworth stated that the basement membrane of the choroid could often be followed over or upon the surface of a tumor even when this projected considerably into the eye, and when atrophy of the epithelial layer from pressure existed.

Dr. Bowditch spoke of a new test for albumen, viz., picric acid, recommended in an article in the March number of Brown-Séquard's Archives, translated from the *Gazette Méd. de Paris*, 1873, p. 122. A drop of the fluid to be tested, urine for example, is allowed to fall into picric acid; it sinks through, and, if albumen is present, leaves a white streak. Dr. Bowditch has not found this so accurate a test as heat or nitric acid; e. g.:—

20 cc. of urine + 2 gtt. egg albumen gave slight reaction with heat.

20 cc. of urine + 2 gtt. egg albumen gave distinct reaction with NO_5.

20 cc. of urine + 2 gtt. egg albumen gave no reaction with picric acid.

20 cc. of urine + 4 gtt. egg albumen gave slight reaction with picric acid.

Better results were obtained with picric acid, when a dark background was employed.

PETROLEUM A REMEDY IN WHOOPING COUGH. By DR. WEISS, Staff-Surgeon.—In July, 1872, two children, living in the same house with the author, were taken sick with the measles, a boy of seven and a girl of six years of age. In August, the mother took them together with her other child, 4½ years old, into the country, when this one also was taken with the same disease. The measles were of light form, and with the boy and youngest girl ran a mild course, whilst, with the girl six years old, a severe whooping cough developed itself. Towards the beginning of September, the other two children began likewise to cough; the family returned to the city and the children were separated from each other, the girl six years old being placed in a room by herself, which before this could not be done. During the ensuing eight days the author observed an increase of the cough in the boy and in the youngest girl, with the characteristic sound of tussis convulsiva. During this time, bed bugs were found in the beds of the two youngest children, and, for the purpose of their destruction, petroleum was freely used. To the great astonishment of the mother, after this the children were much quieter nights, and coughed less also in the day-time. Eight days later, the beds being taken away from the children to undergo a similar procedure, the cough returned severely; again, when the beds were returned, becoming much diminished, and finally disappearing altogether. The oldest daughter, whose bed had not been subjected to this treatment, suffered long, in spite of all treatment, and was finally cured by being sent away from home for a change of air.

The publication of this case is interesting in connection with the results of the treatment of this disease in gas-works and by turpentine inhalation.—*Berliner Klin. Wochenschrift.* No. 20. 1872.

Bibliographical Notices.

Lectures on Madness in its Medical, Legal and Social Aspects. By EDGAR SHEPPARD, M.D., Professor of Psychology in King's College, London. Philadelphia: Lindsay & Blakiston. 1873. 8vo. Pp. 186.

THESE seven lectures, by a new professor in a new chair, have a freshness and directness quite Watsonian, which is the highest compliment to their style the writer can bestow. The matter, for the most part, is worthy of the style. The subject is treated rather generally, of necessity, but is so presented as to give important points due prominence, and to prove an incentive to further research on the part of the student.

The author thinks insanity rather on the increase, in spite of the negative opinions of Maudsley and Robertson. Statistics, though not wholly reliable, show an increase for England and Wales, in the past ten years, from 2 to 2½ per thousand of the population. Civilization, so called, is indirectly responsible for this increase, since the greater the rate of social progress the greater the waste and loss of power. The higher the mental standard of the race, the more marked is individual deterioration and failure. Hereditary causes rank highest. *Occurring cases* are about equal in the two sexes. More men get well or die, and more women become incurably insane. The country furnishes a larger proportion of cases than cities, because intermarriages, underfeeding, and want of intellectual activity prove, after all, more fruitful of insanity than the wear and tear of town life. This fact seems to diminish the force of the charge against civilization of inducing an increase of mental disease.

Insanity, he thinks, always presupposes disease affecting the vesicular neurine of the convolutions, leaving, in most cases, appreciable lesions, and in general paralysis, notably distinct and peculiar changes. The causal classification of Dr. Skae, notwithstanding its convenience to the certifier, he discards, and substitutes nothing for the old symptomatic divisions of Pinel, of mania, melancholia, dementia and idiocy. Although the former is equally imperfect with the latter, we must give it credit for an attempted approach to a scientific value. Such terms as phthisical, climacteric, traumatic or puerperal mania, melancholia or dementia, certainly convey much more of a case than either of the last three alone, though the mental disease may be essentially the same in all.

The prominent forms of mental disease are illustrated by typical cases vigorously presented occurring in the lecturer's experience, or selected from that of others. The writer agrees with Esquirol, that "moral alienation is the proper characteristic of mental derangement." He says "moral perversion is the substratum of every deviation from the normal standard of mental integrity." Still, in a case where no intellectual disorder is apparent, the morbid causes of the moral perversion should be carefully elicited. Insane impulse is not really the isolated phenomenon it seems, but depends on an underlying insane temperament or *diathesis spasmodica.*

The treatment of insanity is not considered at length or in detail; but the ideas advanced are practical and plainly set forth. The hospital is the best place for the insane in general, and early treatment is of the greatest importance. With the wealthy, the home may be turned into a hospital, sometimes, to advantage, and some well selected cases of insanity, particularly of puerperal mania, may recover at home, under favorable circumstances. There is nothing said about cottage and family systems, and no allusion to "free air" or "Gheel," for which let us be duly thankful. The insane have suffered enough from the anti-hospital and the non-restraint manias. The author, after showing the mischief caused by the attempt at an absolute disuse of mechanical restraint in English hospitals, delegates the subject to the superintending physician, where it belongs as a purely medical matter. The "cold pack" in acute mania he values partly from its involving complete restraint. The Turkish bath is recommended in melancholia. High feeding, forcible if necessary, with moderate stimulation, is of the first importance. There is nothing to fear from what Sydenham calls "too great spirituousness and richness of the blood" in cases of insanity. Chloral outranks opium, in the author's opinion.

Such is the general scope and character of a very useful series of lectures. The students of King's College, however, have had the advantage of the reader in frequent clinical demonstrations concurrent with the lectures at Colney Hatch Asylum, where Dr. Sheppard is one of the medical superintendents. T. W. F.

The Cerebral Convolutions of Man. By ALEXANDER ECKER, Professor of Anatomy and Comparative Anatomy at Freiburg. Translated by ROBERT T. EDES, M.D. New York: D. Appleton & Co. 1873. Pp. 87.

THOUGH the original work appeared four years ago, it has been little known in this country, owing chiefly to the want of a translation. Dr. Edes deserves well of the profession for the excellent manner in which he has supplied this deficiency. Ecker's description is, almost without exception, clear and easy to follow, with the assistance of the drawings, in which all confusing details have wisely been suppressed. The views of the author are more like those of Bischoff than of any other observer; both recognize five lobes—the frontal, parietal, temporal, occipital and trunk lobes, though they do not agree as to the boundaries. Ecker makes the fissure of Rolando the division between the frontal and parietal lobes, giving one of the central convolutions to each, while Bischoff gives both to the parietal. Ecker denies that the external occipital fissure disappears in the eighth month of fœtal life, as Bischoff maintains, claiming that it is represented by a small sulcus into which the parietal fissure (the intraparietal of Turner) frequently opens. There is no doubt of the existence of the fissure which Ecker describes; indeed, Bischoff's plates show it perfectly, but this leads us to doubt if it be really the one which the latter observer denies.

We are not acquainted with any system of nomenclature of the convolutions which is entirely satisfactory, but it seems as if both embryology and comparative anatomy favored one founded on a plan of longitudinally arched convolutions and fissures. It is not easy to see the advantage of a temporal lobe, obtained by drawing an arbitrary line in front of the occipital, according to Ecker, or of the parietal, according to Bischoff. The boundaries of the occipital lobe are, except on the median surface, entirely meaningless.

It is easy to criticize a work of this nature, for the field is still so new that few points are settled beyond question; but this book has the great merit of giving very clearly the outlines of a system by which the arrangement of the convolutions is made intelligible to the general medical reader. T. D., JR.

BOOKS AND PAMPHLETS RECEIVED.

Lectures on Diseases and Injuries of the Ear, delivered at St. George's Hospital, by W. B. Dalby, F.R.C.S., M.B. Cantab., Aural Surgeon to the Hospital. With twenty-one Illustrations. Philadelphia: Lindsay & Blakiston. 1873. Pp. 228.

Perityphlitis. By Wm. T. Bull, M.D. Re-printed from the New York Medical Journal. Pp. 27.

On the Treatment of a severe Case of Lignitudo Capitis. By Dr. Carl Both. Pp. 4.

Clinical Reports from Private Practice. By John Herbert Claiborne, A.M., M.D., Petersburg, Va. Jos. Van Holt Nash. 1873. Pp. 424.

A Practical Treatise of the Diseases of the Ear. By D. B. St. John Roosa, M.A., M.D. Illustrated with Wood Engravings and Chromolithographs. New York: Wm. Wood & Co. 1873. Pp. 535. (For sale by A. Williams & Co., Boston.)

The Sanitarian for October. The New York Medical Journal for October. (From A. Williams & Co.)

TRANSFUSION OF MILK IN CHOLERA.—In the *Aberdeen Medical Student* for July 4th, Dr. Edward M. Hodder, of Toronto, recounts the following experiments made by him during the last epidemic of cholera in Toronto, twelve or fourteen years ago. A stout-built farmer was admitted to the cholera hospital. He was in a state of collapse, cold, pulseless, blue, and shrivelled; the secretion of urine was arrested; there was vomiting and purging of rice water fluid — in fact, he seemed dying. A consultation was called, and it was decided that the patient was dying, and nothing could be done. Dr. Hodden resolved to try the effect of transfusing milk. "I ordered," says Dr. Hodden, "a cow to be driven up to the shed, and while she was being milked into a bowl (the temperature of which was raised to about 100° Fahr.) through gauze, I opened a vein in the arm and inserted a tube, and then filled my syringe (also previously warmed), and injected slowly therewith. No perceptible change, either for better or for worse, took place; so after waiting two or three minutes, I again filled the syringe and injected seven ounces more. The effect was magical; in a few minutes the patient expressed himself as feeling better; the vomiting and purging ceased, the pulse returned at the wrist, the surface of the body became warm — in fact, the man rallied, and speedily recovered without a bad symptom." A second case is also recorded which was treated in a similar way, with a good result.—*Lancet*, July 19, 1873.

Boston Medical and Surgical Journal.

Boston: Thursday, October 23, 1873.

The recent outbreak of typhoid fever in London, has afforded the English press a text for much interesting discussion. The origin of the epidemic is supposed to have been traced to the milk supplied by the Dairy Reform Company, on one of whose farms typhoid fever existed, and it was found that a large proportion of those who were affected by the disease received their milk from this particular farm. A number of other interesting facts all seemed to point to this conclusion, and the company was immediately notified as to the probability of this origin, in a communication signed by Sir William Jenner and Dr. Murchison. Notwithstanding this testimony from such high authority, the company hesitated for several days to stop the milk supply, and have been soundly abused by the medical journals for their scepticism. The supply of milk once cut off, the epidemic, it was thought, declined considerably. In addition to a protracted discussion, brought about by this action of the company, many ingenious theories have been advanced as to the way in which the milk became the bearer of the contagion. A loud cry was raised against the use of sewage grass, but it was soon found that the Diary Reform Company had never used it. A more plausible theory was that set forth by Dr. Michael Taylor, in a London daily paper. The warm milk, he states, absorbs with readiness effluvia from the air, and is in the highest degree susceptible to the least mustiness and putrescence in the atmosphere. It is in truth, he says, the most congenial soil or *nidus* in which contagion may nestle and fructify, and in which, like leaven, the germs of typhoid, scarlatina and cholera may be reproduced and multiplied. The way in which the poison enters the milk, according to his showing, is not appetizing, to say the least, to partakers of this beverage. In a previous similar outbreak, the cows were milked by the hands of a woman who was nursing cases of typhoid fever on the premises. The dry epidermic dust, the *débris* from the peeling of the skin, was shaken from the arms and dress of the milker into the milk-can, or was absorbed from the atmosphere charged with these floating particles.

It has been also supposed that the water with which the cans were washed came from a well tainted by a defective sewer. This was found to be the case at Wolverhampton, where an epidemic of typhoid was also raging.

Although there has been much debate as to the way in which the milk has been contaminated, little doubt has existed amongst the profession in England that such is the fact. But now that the smoke of battle has cleared away, we understand, at last accounts, that serious doubts are arising as to whether the much abused milk is, after all, to be held responsible for the outbreak.

Moderator Band of the Heart.—Dr. George Rolleston, in the Harveian Oration recently delivered before the Royal College of Physicians, exhibited in the heart of a bird, the Australian cassowary, a structure which he is quite sure has never been described or figured before. This structure is a moderator band which has never been found in any other member of the class Aves, though it is largely developed, and, indeed, exactly reproduced in the hearts of certain mammals, and is represented, at least rudimentarily, in our own. The band passes directly across the cavity of the right ventricle from its fixed to its movable wall. A band of similar function has often been figured as existing in the hearts of most or all reptilia below crocodilina; and it serves to close up and expel the blood from the pulmonary compartment of their imperfectly divided ventricle.

Dr. Rolleston proceeds to inquire as to the morphological bearing of his discovery and as to what traces of it we can find in ourselves. He states that the valves of the heart in the higher vertebrata may be spoken of as being but trabeculæ flaked off from the inner surface of a muscular sac, and subsequently made more or less membranous.

The musculi papillares represent the disposal or destination of the innermost layer of the right ventricle, according to Dr. Pettigrew; and the lecturer considers the moderator band to be but a specialization of the next layer from within outwards.

"If we look at the outer aspect of that very constant musculus papillaris, which passes in man from the outer and movable wall of the right ventricle to distribute its chordæ tendineæ to the two more anteriorly placed of the three segments of its auricular valve, we shall frequently see that its longitudinal fibres are crossed nearly or quite at right angles by a slender fibrous band, so that we have before us an appearance not wholly nor essentially unlike that presented by the striæ longitudinales of Lancisi and the fibres of the corpus callosum when viewed in neutral connection. This band of fibres can sometimes be traced upwards towards the conus arteriosus, and be seen not to die away until close upon the point of origin of the most anteriorly or upwardly placed chorda tendinea arising from the septum to pass to the hindermost of the three segments of the tricuspid. The points between which this line of fibres lies may be observed to be the very same as those between which the moderator bands in the cassowary and the sheep stretch as free columns. It is not altogether rare to see this band raise itself from the position of fusion, like the ventricular wall, and assume the character of a cylindical band for a lesser distance, but with no less distinctness as a column than in the ungulata.

"Every gradation exists between the entire obsolescence of the moderator band, which we sometimes see in the human heart, up to the important and structurally prominent development attained to by it in the ungulate mammal, and this solitary instance for the class of birds, and the sub-class with such generalized affirmities of Struthiones." (A full report of this lecture with illustrative plates may be found in the *British Med. Journal,* July 5, 1873.)

A CORONER'S inquest was recently held in Blackburn upon a person who died from the use of the stomach-pump. The following statement of the case is taken from the *Lancet* of Aug. 30th, p. 311.

"It appears that the deceased was accustomed to take, daily, half an ounce of tincture of rhubarb as a stimulant and tonic, for which he was in the habit of calling every evening at the shop of a druggist at Blackburn. At 7, P.M., on the evening of the 16th, he called at the shop and asked for 'his usual dose' which he drank then and there, but remarked that it did not taste as usual, and the druggist looking at the bottle from which the dose had been taken, found that he had given him laudanum by mistake. A scruple of sulphate of zinc dissolved in a tumbler of water was immediately given. A medical man who was called proceeded to use the stomach-pump. 'The tube was too large, and on the smaller one being introduced at the mouth, that was found to fail also.' Ten grains more of the sulphate of zinc were then administered, and the deceased vomited copiously. The deceased never seems (after vomiting had been induced) to have had any symptoms of narcotic poisoning. He complained very much of his throat, and the administration of nourishment became difficult. He was much emaciated, and died on the afternoon of the 19th, three days after the accident.

The post-mortem examination revealed a stricture of the œsophagus (probably malignant), which accounted for the difficulty in passing the tube. Above the stricture, the walls were very thin, and a perforating fissure was discovered which had doubtless been made by the tube of the stomach-pump.

He seems, previous to the accident, to have presented no symptoms of stricture of the œsophagus beyond some slight dyspepsia accompanied with "water-brash." The jury exonerated both the medical men from any blame, and very properly looked upon the untoward occurrence as a pure accident. Very properly also, they considered the druggist deserving of grave censure, for, from the evidence, it appeared that no precautions had been taken by him to readily distinguish between the bottle which contained the laudanum and that which held the tincture of rhubarb."

PASSAGE OF A LARGE NUMBER OF PINS, &C., PER ANUM. Reported by JAMES L. FITE, M.D., Lebanon, Tenn.—The following interesting case came under my observation, and I send it for the Journal. For a greater part of the history I am indebted to the little patient's father.

Minnie Ross, three months old, on the 25th of February, 1873, had an action from her bowels, after which the points of three pins were discovered. The mother took hold of them with her fingers and pulled them out. The pins looked bright and new.

About three o'clock the same afternoon, two more pins were extracted in the same way—one point, and the other head foremost.

On the next day, about three o'clock in the afternoon, the baby passed thirteen more pins and two needles—the needles were small cambric needles with the points broken off. The pins were all of the same kind, except one large brass pin.

About half-past 3 o'clock on the same evening, she passed a small agate button. This was on Wednesday, the 26th of February, 1873.

On the following Monday, March 3d, about 8 o'clock P.M., the baby passed nine more pins, eight of which I enclose to you. These, you will discover, are somewhat corroded.

On Thursday following she passed one pin, very much corroded.

So far as I know, the baby has never had a pain or made a grunt from the effects of these pins, &c. Minnie Ross was three months and nine days old on the day the first pins appeared.

My theory is, that these pins, needles and button were given to the baby by a little servant girl, on the morning of the day the first pins came.—*Nashville Journal of Medicine and Surgery.*

REPLANTATION OF TEETH.—During the discussion of the subject of alveolar abscess, at the late meeting of the Illinois State Dental Society, Dr. Chase, of Missouri, remarked that cases of replantation are more numerous than we should have supposed. He said :—

" We know that teeth have been knocked out and lain in the dirt for two or three days, and after replacement have grown firm, and after recent luxation the circulation has become re-established.

" In case of persistent alveolar abscess, he thought every one justified in conquering it by extraction and replantation.

" It is astonishing what a tooth will bear. The idea that the periosteum is destroyed by cutting off the apex of the root is all a mistake. It is not at all necessary to keep the tooth in tepid water or blood. Time may be taken for the operation. In some cases it may be well, previous to operation, to take an impression for making a plastic retaining cap or splint upon, to be used after the replacement of the tooth. He should treat the next case of a persistent nature that came under his care in this manner.

" When there is no external opening in alveolar abscesses, forces creasote up ; it causes great pain.

" Remembered a case, of two teeth treated in the same mouth, though not at the same time. One had an external opening, the other not. In the case without opening, there was more pain than in the other, but it succeeded in a shorter time than the one that had the opening.

" In a communication in a recent number of the *London Dental Review*, the author advocates pepsine for dissolving dead portions of pulp. This struck the speaker favorably, and accordingly he had tried it for several months. It accomplished its work within a few hours, provided the pulp has not previously been treated with creasote or tannin."

Dr. Kilbourne, of Aurora, Ill., related a case of extraction of a first bicuspid, for incipient ulceration, and replantation. After cleaning root-canals with creasote, and filling with gutta-percha, and filling carious cavity with tin, the tooth was replaced and left without ligation, and has been doing well since—about two years ago.—*Amer. Jour. Dental Science.*

Correspondence.

THE TRAINING SCHOOL FOR NURSES.

MESSRS. EDITORS,—As the time for opening the Training School for Nurses draws near, the question of its probable usefulness is becoming a subject of more lively discussion among physicians.

The following are the chief among the arguments used by those who take ground against the scheme.

1. That the claim of its supporters, that a better and more refined class of women will be attracted into the profession of nursing, will not be justified by facts.
2. That the nurses which we now have are good enough.
3. That much learning will make the new nurses—if not mad, at least uppish and intractable.

The answer to the first objection must be left to the future. It may be that this claim has been urged too strongly, and that it is, in fact, to a better modelling of the old clay that we must look, rather than to the introduction of better clay. If, however, there are intelligent and refined women who are at present on the fence in the matter, we know of no better inducement that could be offered to them to take the right step than that which is offered by the new plan.

As to the second objection, if we are content to neglect the modern means of investigation and treatment in our practice, and to find ourselves, after years of experience, losing more and more our confidence in the efficacy of all medical treatment, as Rusticus, in his last letter, confesses to have been doing, then we can get along well enough with the nurses that we now have.

If, on the other hand, we desire to make a science of our art, to know if, and exactly how much, and after what time, and in what respect our digitalis affects the pulse, and our calomel the temperature, or the daily or hourly variations in pulse and temperature from any cause, or if we wish to know the character of the excretions through the day, or to test the doctrine of crises in our practice, or if we wish to give cold baths of a definite temperature in typhoid fever, or to have the ear syringed out so that the fluid will go where it is wanted, or leeches or cups applied, or subcutaneous injections given, we cannot do it without the aid of skilled nurses, and we can do it with them, as has been abundantly demonstrated.

With the surgeon, the case is not very different. As matters stand, he must, in private practice, spend as much time in doing what a skilled assistant could do as well, and often better.

One great reason that among the physicians in large practice in England and Germany there are more that become distinguished as scientific and literary men—Professor Traube and Sir Henry Holland, for example—than among the same class here, is that the work in these countries is better subdivided, the educated men taking the head-work and becoming better educated, and the skilled assistants taking the manual work.

The office of famulus is not an extinct one in Germany, and in the obstetrical department of the Vienna hospital a large class of female nurses receive regular instruction from a regularly instituted professor (Professor Spaeth).

There is no reason why the long list of surgical dressings, including the application of splints, &c., should not be done by trained nurses, and the hurried surgeon be given the opportunity of eating his dinner in comfort, and getting to the polls at election time.

There is no reason why regularly educated physicians should be electricians or masseurs.

The specialists for nervous diseases should know how electricity ought to be used in their department, and the surgeon in his, and the details could be perfectly well intrusted to skilled assistants.

It will be said that this would be unfair to the younger men, who would thereby lose a lucrative part of their practice.

The argument would be as fallacious as the time-old one that the invention of machines is injurious to the hand-laborer. Let the standard of learning be raised among physicians, young or old, and increased confidence on the part of the public, and increased and more lucrative work, will inevitably be theirs.

We hope, some day, to see these changes made; and, if the School for Nurses shows itself able, with the help of the hospital, which certainly will not suffer thereby, and of the physicians interested, to turn out nurses that are really skilled, we have no doubt that the experiment will succeed.

With regard to the third objection, it is, we think, unfounded. Systematic training makes people more obedient to rule rather than less, and increase of knowledge, so far as it influences the character at all, influences it for the better.

QUI FACIT PER ALIUM FACIT PER SE.

MEDICAL ELECTRICITY.

MESSRS. EDITORS,—With your permission I desire to say a few words by way of reply to a communication on the subject of medical electricity of your correspondent, Rusticus, who seems equally anxious to get information himself and to impart it to others. Electricity is a science of vast depth and intricacy, and, more especially, that part of it which belongs to animal structures; in proof of which I will mention that even Carpenter, accustomed to those profound researches we admire in his Physiology, confesses himself unable to follow Du Bois-Reymond to the full extent of those investigations he has made on this subject. Difficult, indeed, would be the practice of medical electricity, and confined to the hands of very few, if one had to go to the very bottom of inquiries like these, and might not venture, for example, to send a current from his battery through a nerve until he had first considered how this artificial influence would affect certain numberless electrical circles moving spontaneously within the infinitesimal molecules of the part itself, each pair of which becomes peripolar or depolar, as the nerve is in a state of action or at rest. I question, indeed, whether even those who amuse themselves with such minute speculations, bring them into actual practice, or are not rather guided by those external symptoms, and that ordinary experience, equally within the reach of my friend Rusticus and the great multitude of other practitioners.

Haud inexpertus loquor. When, some years since, my attention was first directed to electricity as a means of curing disease, the instruments themselves, I confess, presented a difficulty at the very outset; they were new to me, and, as a matter of consequence, not understood. I then had recourse to books, which began with abstract, half metaphysical discussion, extending far into the volume before any practical matter was approached. This mass of introductory matter I do not, by any means, mean to say was useless; I would only assert that it was too much labored and remote for a beginner, and that all the essential points are comparatively simple, and such as may be mastered without any unusual share of difficulty. Since this time, many good works on the subject have been written, as those of Althaus, Reynolds, Tibbits, Hamilton, Meyer, etc., and many admirable machines constructed, as those of Remak, Fromhold, Meyer, and the Galvano-Faradic Manufacturing Co. of New York; the latter are those I now use, as being at once simple and efficacious.

While making these remarks, I am not at all to be understood as if desirous of defending those itinerant and other electricians whom Rusticus so justly decries; on the contrary, such ignorant pretenders deserve no countenance, and, as in the instance of the lady with her "primary" and "secondary" who brought on hemiplegia, should be prosecuted and punished by law. All I would advance, is, that the practice of electricity is open to every physician; that the success with which he uses it will depend mainly on his knowledge of disease, and that there is no secret in this, any more than in any other department of medical science. While I would caution the public against the quack, local, itinerant, male and female, I would also remind the physician of his own ability, and encourage him to make use of electricity himself, if for no other motive than to take it out of the hands of the uneducated. It would, indeed, be a strange thing to see the country overrun with impostors who carry a "box" filled with mischief, like that of Pandora, while a medical man is obliged to look on, or send his patient to a specialist in Boston, New York, or elsewhere.

But I fear, gentlemen, that I have taken up too much of your valuable space, and must conclude somewhat abruptly by advising Rusticus, and others who desire to secure to their patients the benefits of electricity, to procure some such instructive books and some such effective instruments as those above spoken of, when, in a short time, with a little study and a little practice, they may thrust out the empiric, vindicate their own claims, and not trouble the specialist. I have the honor to be yours,

URBANUS.

Obituary.

DIXI CROSBY, M.D., LL.D., died at his residence in Hanover, N.H., Sept. 26 ult., aged seventy-three years and seven months. For thirty years he was connected with Dartmouth College, holding the chair of surgery for more than three-fourths of this long period. Dr. C. belonged to a family of physicians; his father, several of his brothers, his sons and many of his nephews have been, or still are, members of our profession. For several months preceding his death, he suffered from some heart lesion, probably dilatation of the right side, but the immediate cause of his demise was effusion into the cavity—the brain suffering last, so that his end was as peaceful and painless as his life had been pure and exemplary. Truly an honored son of New Hampshire, and a distinguished member of the medical profession has passed away, and we cannot speak of his demise without paying a brief tribute to his memory. He was a man and physician of distinguishing and characteristic traits. A man strong in purpose, determined in action, truthful, just and kindly disposed toward all with whom he came in contact. His *positivism* made him at times seem severe and dogmatic, but it was only innate force manifesting itself in an honest and determined enunciation of his convictions. As a surgeon, he was cautious and skilful; as a physician, he was kind, patient and eminently successful. He has endeared himself to hundreds of young and middle-aged members of the profession who have listened to his teaching or seen him "sever but to save." He was no blind follower of acknowledged lights, but drew his inferences and his illustrations from the storehouse of his own large experience. As he often said of himself, he was "the disciple of no man."

A star truly has fallen from the medical firmament, but it is not lost in darkness: its reflected light will be seen and felt for generations to come. When his name shall be spoken or his history analyzed, let our young men emulate his example, and seek to attain that success which is the reward of traits like his—high aims, studious habits, moral perfection and invincible determination.

All honor to his memory, for he was worthy! A. A. M.

Concord, N. H., Oct. 13.

Medical Miscellany.

DR. W. P. BRECHIN has been appointed to the charge of the department of aural surgery at the Boston Dispensary.

THE King of Dahomey is reported to have changed the fashion of his wearing apparel. Seated on his throne, he received a scientific commission, not long ago, his body profusely decorated with the blue, gold, and green labels which had been carefully peeled from the medicine bottles brought by Europeans into his dominions.—*Canadian Medical Times.*

A PECULIAR malformation is exhibited in the case of a girl at Sweitau, in Bohemia. Both arms are wanting, but the right upper limb is represented by a small, movable outgrowth, a little more than three inches long, attached to the integument near the outer end of the right scapula. The hand possesses only the middle, ring and little fingers, connected directly (there being no carpus) with a forearm an inch and a half long. This rudimentary limb is quite useless; but the child uses her toes to feed herself with, and in sewing and other kinds of work.—*Canadian Medical Times.*

UNPLEASANT HOSPITAL VISITORS.—At Benguella, in Angola, says the *Correio de Sul*, the military hospital is in such a state that wolves have entered it in search of human flesh. The *Correio Medico de Lisboa*, commenting on this, says: "Speaking plainly, our colonies, as regards the hospitals, are, for the most part, the most perfect examples of carelessness, indifference, and contempt of humanity, that can possibly be found."—*London Med. Record.*

ON THE BRAIN.—Professor Ferrier delivered a lecture, in the Section of Biology, at the British Association for the Advancement of Science, "On the Localization of the Functions of the Brain," in which he stated the results of a series of experiments which he had conducted during the last year upon the brains of living animals by means of a small electrical machine. His first object had been to stimulate the brain, with a view of ascertaining whether, in opposition to the theory of Brown-Séquard, he could in this way produce activity of the brain. In carrying on these experiments, he had dealt with cats, dogs, rabbits, guinea pigs, fish, a jackall, and a monkey; and the results obtained had led to the discovery of an entirely new system of phrenology. Applying the electric stimulus to certain convolutions of the brain of inferior animals, he almost invariably produced certain motions—thus establishing the existence of a close connection between those portions of the brain and the action of particular muscles. Pursuing his investigations, he also established a similar connection between other portions of the brain and the senses of hearing, seeing, and speaking; and speculation enabled him to guess, with tolerable accuracy, at those parts of the brain which were the seat of thought, memory and sensation.—*Dublin Medical Press and Circular.*

SCAPULAR CREPITUS.—Under this title, Dr. Galvagni describes (*Medicin. Jahrb.*, 1873) a peculiar crepitating sound, most evident on moving the scapula by placing the hand on it at the lower angle, and sometimes audible even at some distance. In two individuals in whom this was heard, there was extensive deformity of the thorax, the result of pleurisy, so that the scapula was at a considerable distance from the chest. One of the patients died of phthisis; and a large bursa was found between the subscapularis and serratus anticus major muscles, which were both much atrophied. The bursa had worn away part of the serratus and of the subjacent ribs. In a third case, the individual was a seamstress, in whom the crepitus was heard four or five weeks after the commencement of the cramp. Dr. Galvagni believes that, in writer's or seamstress's cramp, the scapular muscle may undergo atrophy, causing the scapula to glide on the ribs, and giving rise to the crepitation.—*Centralblatt für die Med. Wissensch.*, July 19th.

Substitution of Goat's Milk from the Living Animal for the Sucking-bottle.—Dr. H. MacCormac maintains that goat's milk may be abstracted from the living animal, and transferred at once to the infant's stomach, by means of a tube provided with an artificial nipple. In this way, it is thought, the mortality hitherto attendant on artificial lactation may be greatly diminished.

The Cholera in Paris.—The following are the official figures representing the progress of cholera in Paris in the week ending Sept. 15. On Sept. 9 there were 12 deaths; Sept. 10, 25; Sept. 11, 33; Sept. 12, 17; Sept. 13, 25; Sept. 14, 22. On Sept. 15, the reports are incomplete, but appear to show a decrease. The total deaths for the six days were 134. In the civil hospitals, during the six days inclusive, there were 79 admissions and 29 deaths; a considerable mortality, but still one which, at the outset of an epidemic of cholera, does not indicate a very intense form of the disease.—*London Medical Record.*

Verneuil on Muscular Hernia.—The following instance of this rare complaint is reported from the clinique of M. Verneuil (*Gazette des Hôpitaux*, No. 13, 1873). A young, healthy man, aged twenty, stated that, about twenty months before, his foot slipped, and the limb was violently abducted. He felt something give way, but no ecchymosis followed, whilst a tumor suddenly appeared on the inner side of the thigh (he felt slight pain during twenty-four hours). The tumor appeared when the patient adducted the limb, and disappeared during inaction. It was not rupture of muscle, since there would have been ecchymosis, motion would have been impossible, and a gap would have existed between the divided ends. (A cure also would have followed in such a case, but a hernia is rarely curable.) It was considered that in this case the aponeurosis had been ruptured, and the muscle allowed to escape through the opening.

In a work on hernia of muscle, published by Mourlon, in 1861, fifteen cases are recorded. Nine of these occurred in the adductor muscles of the thigh; in two, the rectus femoris was affected. These herniæ have given rise occasionally to curious mistakes. They have been confounded with varices, neuromata, cysts, lipomata, and even reducible hernial tumors. Warren removed one; and a cure has followed an exploratory operation by the secondary union of the border of the aponeurotic wound.—*London Med. Record.*

NOTES AND QUERIES.

We are happy to acknowledge the receipt of a box of very elegant pharmaceutical preparations from Joseph T. Brown & Co.

Mortality in Massachusetts.—*Deaths in fifteen Cities and Towns for the week ending October* 11, 1873.

Boston, 123—Worcester, 26—Lynn, 20—Lowell, 23—Charlestown, 16—Salem, 10—Somerville, 9—Gloucester, 8—Chelsea, 6—Newburyport, 6—Holyoke, 5—Fitchburg, 5—Springfield, 4—Haverhill, 3—Milford, 2. Total, 266.

Prevalent Diseases.—Consumption, 46—cholera infantum, 25—typhoid fever, 20—dysentery and diarrhœa 13—pneumonia, 9—scarlatina, 7.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, Oct. 18th, 139. Males, 67; females, 72. Accident, 6—apoplexy, 6—inflammation of the bowels, 2—bronchitis, 4—disease of the brain, 3—cancer, 3—cerebro-spinal meningitis, 1—cholera infantum, 10—consumption, 22—convulsions, 3—croup, 1—debility, 4—dropsy, 1—dropsy of the brain, 1—drowned, 2—dysentery, 1—diphtheria, 3—erysipelas, 1—scarlet fever, 7—typhoid fever, 11—gastritis, 1—gangrene senilis, 1—hernia, 1—disease of the heart, 2—hæmatemesis, 1—intemperance, 1—disease of the kidneys, 2—disease of the liver, 3—congestion of the lungs, 4—inflammation of the lungs, 8—marasmus, 10—old age, 1—pleurisy, 1—premature birth, 5—suicide, 2—teething, 1—whooping cough, 1—unknown, 2.

Under 5 years of age, 57—between 5 and 20 years, 14—between 20 and 40 years, 34—between 40 and 60 years, 19—over 60 years, 15. Born in the United States, 89—Ireland, 36—other places, 14.

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Original Communications.

MOUNT DESERT AND TYPHOID FEVER, DURING THE SUMMER OF 1873.

By Wm. J. Morton, M.D.

The village of Bar Harbor, situated on one of the many slopes of Mt. Desert Island which stretch from the mountain to the sea, is built along the elevated shore, varying in height above the sea level from ten to fifty feet. The settlement, for very many years consisting of no more than half a dozen houses, has assumed a more notable growth during the last decade, owing to the many visitors attracted thither by the wonderful combination of mountain, sea and island scenery, and it now numbers a dozen hotels and a large collection of smaller houses, the whole accommodating, during the height of the season, from two to three thousand souls. The proprietorship of both hotels and cottages is almost exclusively confined to the native population, whose limited means and contracted ideas have precluded any further realization of the requirements of a civilized township than those primary ones of food and shelter. As a consequence, the primitive means of disposal of the excreta and kitchen washings of a half-dozen cottages are still applied to the crowded summer village.

During the season just passed, the influx of visitors was greater than ever before. The weather was warmer than for many years, and the rainfall was unusually small. Fogs were infrequent.

The evidences of lax sanitary measures were seen on every hand. The necessary outbuildings were, as a rule, not properly cared for; the kitchen drainage either lay upon the surface of the ground near to the houses, or, on the other hand, was led but a few feet to an imperfectly constructed receptacle.

Pig-sties, in several instances, were in evident proximity to eye and nose, and piles of animal and vegetable refuse existed in closely neighboring fields.

These facts, thus far, are not brought forward as a special reproach to Bar Harbor, for, no doubt, many New England towns are in the same condition. There were, however, nuisances of which brief mention should be made in view of their apparent association with subsequent sickness. Of these the most noticeable was an overflowing cesspool maintained within ten feet of the broad veranda of the Bay View, the largest hotel; and to its proprietor many and frequent remonstrances and protests were directed by his guests and others interested. But such complaints were received with stolidity and indifference, and no practical change was made.

In the same field with the cesspool, and within a hundred feet of either house, the proprietor of the Harbor House, the neighboring hotel, kept a pile of putrefying material collected from his kitchen, from which emanated the most sickening odors.

We leave others to judge of the conduct of this gentleman who persistently refused, in the face of the appeals of many excellent men and women, and also of the selectmen, to remove or discontinue the use of this second nuisance, and who further declared that such smells were healthy, and, to prove that they were, he should and did spread the material to rot upon the field.

Curiously enough, in the spring and early summer, a false report had become very generally circulated in the newspapers that typhoid fever existed at Mt. Desert, and this report, then contradicted, later became a verity.

The first marked typhoidal symptoms appeared among the guests of the Bay View House, on Aug. 5th, when a young lady of their number (case 1), after several days of general malaise and lassitude, took to her bed with severe headache, chills and high fever. On the 6th, another (case 2) was ill in the same manner. On the 10th, a young gentleman (case 3), who had been confined to the house for two weeks, with acute synovitis, became ill with the same symptoms as the two preceding.

Fever was the most obvious symptom, the temperature rising gradually, with morning remissions.

On Aug. 13th, a young lady (case 4), in whom the prodromal symptoms of loss of appetite, general illness and mental disquiet had been evident to many for a period of ten days, was seized with slight chills, and a most violent headache continuing for days and followed by the complete history of abdominal typhoid. About the same time, a fifth case (case 5) occurred, but coming under homœopathic treatment, we are unable to give its history beyond the facts that it was undoubtedly typhoid, and that it suffered a relapse, from which recovery was for a long time (up to Sept. 20th) doubtful.

Added to these cases, were two among the servants of the house, both sent home, one of whom (case 6), previously in ill-health, died within a week; the other (case 7), we have since learned from Dr. Grindle, of Somerville, made a slow recovery. In a closely adjoining cottage, another servant (case 8) also had the fever, and this was the only case which occurred outside the hotel.

So much sickness in a short space of time and in one hotel had already attracted attention, especially as the conditions of drainage remained unchanged. A consultation with Dr. Calvin Ellis, of Boston, then temporarily at Bar Harbor, was held, with a view of informing the guests of the probable association of the then prevalent illness with the particular vicinity, but the plan of informing them was, in a degree, forestalled by the question of a solicitous mother, as to whether her other children were as likely to be taken sick as the two then ill, to which there could be but an affirmative answer. The news spread instantly. A panic ensued, and though it was then evening, more than two-thirds of the guests left the house.

Letters from guests who had gone home within the previous two weeks arrived from time to time, containing information of five other cases pronounced typhoid by their respective physicians and of a moderately severe type. These we will refer to as cases 9, 10, 11, 12 and 13. Several other instances of general ill feeling, lassitude and headache, lasting a few days, were undoubtedly owing to the same causes as the preceding.

To summarize briefly. There were, in all, thirteen cases of typhoid fever associated with a residence at the Bay View House. Of these, seven were sick in the house, and five, shortly after or upon reaching home, and one in a cottage within twenty feet of the hotel, at which, it should be mentioned, she took her meals.

Five of these cases might be called normal typhoid, and the remainder abortive, the latter running their course in about two weeks, and not presenting the marked features of the five former.

The diagnosis of typhoid was based upon the characteristic prodromal symptoms, the general increase of temperature, and the existence, in a few cases, of diarrhœa, and in others of evident abdominal tenderness. Rose spots were observed in one case, but in others were not looked for, or, when looked for, not found. All the hotel cases made good recoveries.

The treatment need be only briefly referred to as consisting of an abundance of nourishment, stimulants, cold affusion and aconite, corresponding to high elevations of temperature.

The interesting inquiry into the causes of the outbreak now presents itself.

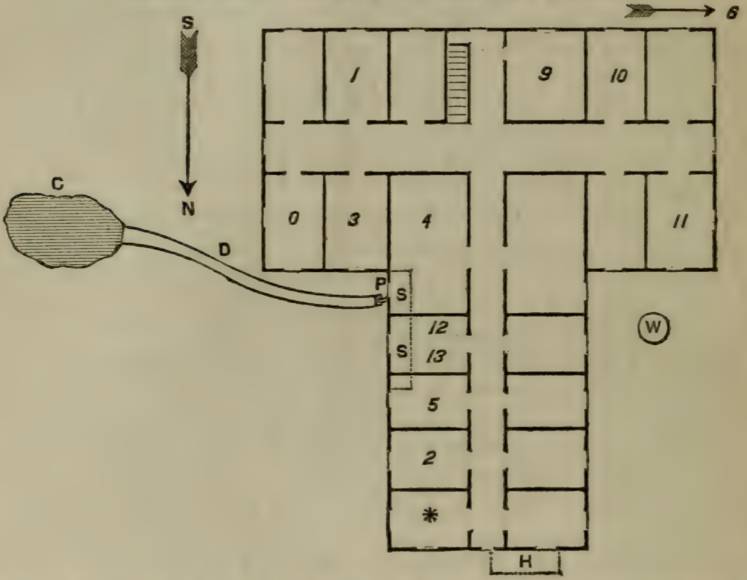
Of general telluric influences associated with low subsoil water and the decomposition of organic materials, whose subsidence had been prevented by underlying strata of clay or ledge, we cannot speak with much certainty, owing to the absence of necessary data. The soil of Bar Harbor is very generally composed of diluvium or drift, and undoubtedly rests on a continuous ledge. It would seem probable, however, that such influences would lead to a more widely distributed sickness. And, further, where disease is so perfectly localized, a local cause is suggested.

The well and the drain remain as the two obviously salient points. Of the former, we can only say that its water was hard, clear and sparkling, and uncontaminated by surface drainage. Of the presence of nitrates, we are at present unable to speak, since the returns of the analysis are not yet available.

But the position of the cesspool and drain presents a striking association, not only with the general locality of the Bay View House, but also with the part of the house in which sickness was most prevalent.

The diagram which follows makes this relation intelligible at a glance.

PLAN OF SECOND FLOOR OF BAY VIEW HOUSE.



S, sink, represented by dotted lines, situated in kitchen on lower floor, where dishe &c., were washed, and water found exit at pipe

P, into

D, covered drain (but open at point P) leading to

C, cesspool, also covered, but imperfectly so, with earth.

W, well.

The figures 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 13 represent the cases which occurred in these rooms respectively. Cases 7, 8, not marked on diagram, were servants, who worked constantly over sink, S, on the floor beneath.

* A case affected for several days only.

O, only room facing into western angle of the house in which a case of illness did not occur.

H, out-houses.

The arrow, at the right, points to cottage, thirty feet distant, in which occurred case 6.

The cesspool already referred to was simply an excavation in the ground about ten feet long by four wide and one foot deep. Over this cavity, boards were placed, and these were covered with the removed earth. It was fifteen feet distant from the hotel, and had been in use for six or seven years. Although the soil was gravelly, it is probable that the whole vicinity of this pool had become saturated and that it no longer had the capacity for absorbing. This in fact became evident, for as early as the second week in July, the foul waters oozed up through the soil-covering and lay upon the surface, giving out a characteristic drain odor, which was noticeable on that side of the house up to and after the occurrence of fever, three weeks later.

But, if the surface of this pool was odious, its interior must have been vile, and from the interior the most direct communication existed, by means of the covered drain marked D, with the western angle of the house, where the pipe P emptied into its open end.

If, as is believed, the worst germs of disease are propagated under cover, we have here an abundant supply of noxious effluvia, daily and nightly emptied into this angle. In the night, when the air was still, especially in this protected spot, these drain emanations must undoubtedly flow up the sides of the house and enter the windows.

We should expect then to find the inmates of those rooms which open into this retiring angle, the ones affected, and such is found to be the fact, as will be seen by referring to the diagram, of which a few further words of explanation are necessary.

The window of the room occupied by case 4 was directly over the open end of the covered drain. The room itself, owing to its peculiar construction, formed a pocket, in which ventilation was a very remote possibility. The cases occurring in this room and the one next, marked 5, were the most serious.

Two cases, reported ill upon reaching home, had occupied, before leaving, the room designated with the figures 12 and 13. The occupant of the room marked with a star was not seriously ill, and has not been included among the numbered cases. The room marked 0 was occupied by the writer, who early fastened down the window looking into this corner, and used only the end window, which, from its situation, offered opportunities for ventilation not open to windows in the angle. To this fact alone, he attributes his exemption. Cases 7 and 8 worked over the sink, as has been said. Case 1 occurred in the room so marked, the door of which was constantly open into number 3.

It will thus be seen that, in a crowded house, a case of typhoid fever was associated with every room, except one, on the side of the house most exposed to the drain emanations, and this fact seems to prove, as far as human evidence can in the present state of knowledge upon this subject, the direct relation of the fever to filth of this description. At this point we leave the inquiry into causes.

We have, in this instance, repeated at Bar Harbor, an experience common to many growing villages where sanitary precautions have failed to keep pace with increased population. And this experience has left its mark in many directions. The Mt. Desert frequenter, to whom the associations of the island were next to sacred, felt grieved to contemplate the sullied fame of his favorite resort, and was almost tempted to apply the well known couplet,

"Where every prospect pleases,
And only man is vile."

The material prosperity of the place suffered a very considerable detriment in the diminished number of visitors, and this injury did not alone affect the hotel proprietors, who failed to receive a large proportion of their prospective summer's earnings, but also extended to each inhabitant who was deprived of the money equivalent for services which he was prepared to render. It is possible that this appeal to the pocket may accomplish what an appeal to the understanding has long failed to do, viz., inaugurate a system of drainage and disposal of kitchen garbage.

In short, the landlord *must* make radical changes or be anathematized, and his hotel avoided. It is idle for him to delude himself with a hastily planted barrel, running over with slime, and point to it as a properly constructed cesspool; or to discourse with all earnestness upon his superior plan of leading filth to a wide expanse of ground directly back of his house and there sprinkling on earth, thus making the chances of health or illness to a hundred guests, depend upon, in the first place, whether he attends to it at all, and in the second, upon his daily judgment as to the necessary amount of earth and the frequency of its application.

However, we wish to speak kindly of the landlords of Bar Harbor, and we are convinced that, with but one notorious exception, they have erred either from indifference or inappreciation of the needs of the occasion.

And while thus plainly dealing with the obvious causes of sickness, and the relation of landlords and their short-comings therewith, it must be agreed that the panic among visitors, and the reports which subsequently gained a wide currency, were greatly disproportionate to the actually existing amount of illness.

The fever did not "rage," to quote a frequently applied term, beyond the eight cases already described as occurring at Bar Harbor and the five who returned home; while a majority of them were of a very mild form.

Nor was the place "pestilential," with the exception of the Harbor House nuisance, beyond the pale of the Bay View House where all the typhoid sickness was located. Of other diseases we should state that a dozen cases of scarlet fever, in its mildest form (with two exceptions), or so-called scarlatina, appeared from time to time, attacking both native inhabitants and visitors. Aside from these two diseases, the amount of illness was less than is usual as compared with the number of people.

We are glad to state that measures have already been taken, which it is hoped will end in the introduction of an abundant supply of the purest water from Eagle Lake. The plan also involves the construction of proper drains.

And the sanitary improvements of the next season must be the measure of each proprietor's good intention, and of the impression made upon him by the events of the last.

No 1 *Park Square, Boston, Oct.* 6, 1873.

Progress in Medicine.

REPORT ON ELECTRO-THERAPEUTICS.

By J. J. Putnam, M.D., Boston.

Electro-physiology.

Ziemssen.—Die Electricität in der Medicin. 4te Aufl.; Physical. und Physiol. Erlangen, 1872. Theil.

Cyon.—Principes d'électro-thérapie. Paris, 1873.

Wreden.—Ueber elec. Reizung d. Gehörorgans. Pflüger's Archiv, Bd. vi.

Weber-Liel.—Ueber das Wesen und der Heilbarkeit d. haufigsten Formen progress. Schwerhorigkeit. Berlin, 1873.

Loewenberg.—Ueber d. Einwork. Elec. Ströme auf d. soyen Binnin-muskeln d. Ohres. Monatschrift f. Ohrenheilkunde; Canstatt's Jahresb., 1873.

Both Cyon and Ziemssen deserve the thanks of the profession for having attempted, in the above works, to rescue electro-therapeutics from the hands of the purely empirical and to place it upon a scientific basis.

The laws of electrotonus, discovered long since by Du Bois-Reymond, Pflüger, and others, are stated by Cyon with remarkable clearness and conciseness.

For the sake of what follows, a brief review of the most important of them may be permitted here.

When a current of electricity is allowed to flow constantly through a (frog's) nerve, its susceptibility to excitations (mechanical, electrical or chemical) suffers certain definite changes. Around the point where the current enters the nerve (positive pole, anode), its irritability becomes diminished, so that to produce a given response (a muscular contraction of a certain strength), a more intense excitation must be used than was previously necessary. Around the point where the current leaves the nerve (negative pole, or kathode), the irritability of the latter becomes, on the contrary, greater than before, so that an irritation previously inefficient now meets with a response.

These states of altered irritability are called, respectively, anelectrotonus and katelectronus. Several theories for their production have been proposed (by Du Bois-Reymond, Hermann and others), but it will be sufficient for our purpose to assume, speaking roughly, that, where the current enters the nerve, the vibration of its molecules becomes less rapid than before (anelectrotonus, or diminished irritability); where the current leaves the nerve, that the rapidity of the molecular vibration is increased (kalectrotonus, or increased irritability).

At the moment that the electrical circuit is closed, the state of increased molecular vibration is induced with great suddenness around the kathode, and thereby the nerve is sufficiently excited to call out a contraction in the muscle which it supplies.

This excitation, accompanying the closing of the circuit of a constant current, takes place, therefore, exclusively at the negative pole (kathode), and *not at all at the positive pole* (anode).

When the circuit is broken, the reverse is true; the diminished molecular vibration around the positive pole (anode) during the passage of the current gives place suddenly to a state of normal, or even increased vibration, and an excitation, *confined to the positive pole*, is the result.

Many investigators have attempted to reproduce these phenomena upon the human subject, and it has, indeed, been demonstrated satisfactorily that with the optic (and perhaps with the auditory) nerve the anelectrotonic and katelectrotonic states may be produced at will.

Pflüger's laws are more difficult of verification; but by taking great precautions, Cyon has obtained very satisfactory results in experimenting upon the ulnar nerve.

It is a matter of common observation in experimenting with the human nerve, that a contraction attends the closing of the circuit (if the current have a certain strength) when only the positive pole is on the nerve, the negative pole, on the contrary, at an indifferent point.

This is, no doubt, because the human nerve is surrounded by good conductors, which give an easy passage to the electrical current, and induce it to leave the nerve almost immediately after entering it.

The muscles constitute for the nerve, in fact, a negative pole (kathode), and the conditions for the induction of katelectrotonus at the moment of circuit-closure are thereby given, although of the metallic poles only the positive be in the neighborhood of the nerve.

It is claimed, on many sides (especially by Brenner and his followers with regard to the auditory nerve), that a state of more or less permanent anelectrotonus may be induced in a nerve by bringing it under the influence of the positive pole for a time, and then gradually reducing the strength of the current to zero, so as to avoid the circuit opening reaction. In this way, it is said that irritative conditions in nerves, and, indeed, in other tissues, may be removed.

The facts may be true, but physiology does not justify this explanation; for, with the frog's nerve at least, the anelectrotonic state disappears immediately, or almost immediately, after the opening of the circuit. A more probable explanation would seem to be that better conditions of nutrition are induced in the irritated nerve by the passage of the current. Furthermore, much doubt has been thrown on the propriety of Brenner's diagnosis of irritation, and, indeed, on the whole theory of the reaction to electricity of the auditory nerve, by Wreden, of St. Petersburg, who has made a long series of experiments to show that the subjective sounds which attend the so-called galvanization of the auditory nerve, are, in fact, due to the contraction of the intrinsic ear-muscles.

That many cases of ringing in the ears and partial deafness are, in fact, dependent upon abnormal conditions of these muscles, and are often curable by galvanizing them (by passing a metallic probe into the tympanic cavity through the Eustachian tube), has been conclusively shown by (among others) Weber, of Berlin. Loewenberg suggests that, by the use of a manometer connected with a water-tight ear-speculum, the supposed action of these muscles might be studied.

Both Cyon and Ziemssen criticize severely the loose and unscientific manner in which marvellous results are set down on all sides as due to the so-called galvanization of the cervical sympathetic. The cervical sympathetic (apart from its connection with the pupil and the salivary glands) contains the vaso-motor nerves for the ear, face, and some parts of the brain, but not for the rest of the body, and the nutrition of the legs, for instance, can in no wise be dependent upon its influence.

Moreover, as the sympathetic is usually galvanized, not it alone, but also the depressor nerve and the vagus, must be brought under the influence of the current, and, perhaps, through their agency, the circulation of the distant parts of the body may, indeed, be affected.

Cyon points out that the spinal centre for the vaso-motor nerves of the arms lies in the upper dorsal, that for those of the legs in the lower dorsal, region.

Ziemssen has measured carefully the rise in temperature which normal muscles exhibit when made to contract by faradic currents, and found it to amount to several degrees in as many minutes (4°–5° F.). The therapeutical importance of such a rise must, of course, be great. No elevation of temperature, on the other hand, attended the passage of a pretty strong galvanic (constant) current through the skin and muscles for five minutes, except at the point of application of the electrodes. At the same time, there can be little doubt that the nutrition of the various tissues of the body, especially when they are for the moment in a pathological, but tending to return to the normal, state, may be improved by the simple passage of a constant (galvanic) current. Physiological evidence therefor is given by the increased weight which Orimus and Legros found a number of puppies, selected at random from a large litter, to attain under daily galvanization.

ELECTRO-THERAPEUTICS.

NEFTEL.—Galvano-therapeutics. New York, 1871; also, New York Medical Record, December, 1872.

J. CLARENCE BLAKE.—Annual Report of the Massachusetts Charitable Eye and Ear Infirmary.

J. RUSSELL REYNOLDS.—Clinical Uses of Electricity. London. 1873.

HERBERT TIBBITS.—A Handbook of Medical Electricity. London. 1873.

HOLST, Dorpater.—Die elect. Behandlung von Migraine. Med. Zeitschrift, II., 4 Schmidt's Jahrb., No. 6, 1872.

BOUCHUT.—Paralysie Infantile. Bull. gén. de Thérapie. 1872, Août. Centralblatt, No. 45, 1872.

CINSELLI.—Tulle correnti galvanische continue. Gaz. Med. Ital. Lomb., No. 37. Canstatt's Jahresb., 1873.

N. MAYER.—Philadelphia Medical Times, May 15, 1873.

GERHARDT.—Heilung d. Icterus catarrhalis durch Farad. d. Gallenblase. Berl. Klin. Wochenschr., No. 27, 1873.

GEORGE M. BEARD.—Cases illustrating the Treatment of Skin Diseases by Central Galvanism. N. Y. Medical Record, Aug. 15, 1873.

Neftel and Blake report cases where electricity was of service in the diagnosis and treatment of various aural diseases Neftel found "hyperæsthesia" of the auditory nerve in some cases of chlorosis, and a torpid condition in case of Bright's disease. (Compare above.)

Reynolds and Tibbits, both connected with the Queen's Square Hospital, London, recommend the use of *static* (frictional) *electricity* for its tonic effect upon the nervous centres, the treatment consisting in charging the patient, placed on an insulated stool, with *free electricity.*

Tumors of various kinds are reported as having been relieved, at least temporarily, in this way.

The free electricity obtained from one pole of a large galvanic battery (the other being connected, by way of the gas tubing, with the earth) was found by them to have a similar tonic effect in cases of general nervous debility.

Dr. William R. Fisher *(New York Medical Journal,* May, 1873) speaks of the importance of placing weak or palsied muscles in a relaxed condition while faradizing them. Under these circumstances, they become able to contract, although previously unable. The reporter believes the point to be an important one.

Holst has been more fortunate than most physicians in his treatment of hemicrania by electricity. He distinguishes sharply between two opposite forms of the disease, one due to an irritated condition of the cervical sympathetic, and consequent spasm of the vessels controlled by it (observed and studied upon himself, by Du Bois-Reymond), the other to paralysis of nerve and vessels (first described by Woellendorff).

The excessive irritability of the nerve he treats by bringing it (vide above) under the influence of the anode of a galvanic battery, a long and narrow electrode being pressed inwards and backwards from just in front of the sterno-mastoid muscle, while the other pole is grasped by the patient's hand.

The neuro-paralytic form he treats, on the contrary, by exciting the nerve strongly through the agency of the negative pole (kathode).

Not being able to tell, in most cases, which form of the disease is present, he lets the results of treatment decide the diagnosis.

Dr. Anstie believes, as is well known, that migraine is dependent upon degenerative changes affecting the root of the trigeminus. In this, as in all true neuralgias, he finds that the vaso-motor nerves are generally affected, but secondarily causing, in most cases, first vascular spasm, then vascular paralysis.

The use of *weak, long-continued galvanic currents* is increasing in favor. Bouchut found good results in infantile paralysis from letting the current from four elements run from six to twelve hours at a time through the paralyzed muscles, and considers the resulting improvement an argument for the myopathic origin of the disease. Ciniselli and Mayer recommend the wearing for a long time of batteries, such as have been long in use in the treatment of ulcers, either on opposite sides of the head or on other parts, for neuralgia, paralysis and a long list of nervous disorders.

These batteries differ from Dr. Garratt's disks principally in the further separation from each other of the metallic plates, whereby the tendency of the current to penetrate deeper into the tissues is increased.

T. Clifford Allbutt *(West Riding Hosp. Rec.* for 1872 ; *Practitioner,* Dec., 1872) gives a number of cases of *dementia* and *melancholia* treated successfully by the use of galvanism directed to the head and the cervical sympathetic. Arndt *(Zeitschr. f. Psych.,* Bd. 28) has met with similar results.

Arndt's observations, however, have by no means been confirmed in all the large hospitals in Europe, and the cases and observers are too few as yet to justify a decided opinion in the matter.

Gerhardt has succeeded, in several cases of *icterus catarrhalis,* in causing the gall-bladder to contract strongly by energetic and well-directed faradization, whereby the plug of mucus was expelled from the gall-duct. In most of these cases, careful percussion had revealed an area of dulness, which disappeared after treatment.

In the treatment of skin diseases of the most chronic and obstinate character, Dr. Beard has met with marvellous success, both when using local and central galvanism (galvanism of nervous centres). We shall look with interest to see if his observations are confirmed by others.

It has long been known that the health of the skin may be influenced by the state of the central nervous system, and that eczematous, herpetic and other inflammations may be caused by lesions of peripheral nerves, but that so close and so general a connection exists between the state of the central nervous system and that of the skin as the results claimed to follow the galvanization of the latter would indicate is entirely new and strange.

Electro-surgery.

J. Byrne.—Notes on Uterine Surgery. New York Medical Record, December, 1872, and January, 1873.

Neftel.—Die elect. Behandl. d. bosärtigen Geschwülste. Virch. Arch., 1873, I., VII.; Centralblatt, 5 July, 1873.

Carl Michel.—Pharyngitis u. deren Heilung durch Galvanocaustik. Allg. Med. Centr. Zeit., 26th and 27th March, 1873.

Rodolfi.—Della elettriato nella congiuntivite gran. Gazz. Med. Ital. Lomb., Nov. 2, 4, 7, 14, 1872. Canstatt's Jahresb., 1871. Schivardi. 1871.

Trueheart.—Granular Conjunctivitis. New York Medical Record, No. 168, 1872.

Girard.—Amputations-neuroma. Deutsches Arch. f. Chirurgie, B. I., H. 1.

Dr. Byrne appears as an advocate for the use of the electro-cautery in uterine surgery, in a series of very sensible papers, in which he also describes some new and apparently excellent forms of instruments and batteries. (All fluid batteries for this purpose will, probably, be superseded some day by magneto-electric machines, such as Mr. M. G. Farmer makes for exploding torpedoes.)

Michel has used the galvano-cautery to advantage in pharyngitis, touching lightly the thickened prominences of the mucous membrane with the red hot wire, which may be easily introduced, even through the nostril. The operation is not attended with any great pain, and in ten or twelve days every trace of it has disappeared.

In granular conjunctivitis good results are claimed to follow the use of the constant current, one (either) pole armed with a soft sponge being applied directly to the conjunctiva, while the other is placed on the eyebrow or molar process. (Vide Journal, Vol. x. 1872, page 305.)

The duration of each application is ten to thirty minutes.

Three to five applications are generally enough; if not, then one should begin again after an intermission of three to eight days. Meantime, solution of nitrate of silver, gr. ij.–℥i., may be used.

Neftel claims to have destroyed a number of cancerous growths, with better results than usual in the way of recurrence, by means of electrolysis. He believes that the cancer cells, being of low vitality, are killed by the current, even when they are not in a position to be directly decomposed.

Papers by him on the subject have appeared in several journals, and would repay careful perusal.

Girard gives a carefully reported case in which three amputation-neuromata, which had recurred twice after removal by the knife, were destroyed by electro-puncture, needles connected with a battery of thirty-six small Bunsen elements having been thrust into them. Eight weeks after the operation (the longest time that they had remained away before), there was no sign of recurrence.

THE CAUSES OF DEATH AFTER SEVERE SUPERFICIAL BURNS.—This question is discussed at considerable length by Dr. Mendel, of Paukow, in the *Vierteljahrssch. für ger. u. off. Med.* (xiii. 1). It is a familiar fact that a superficial burn, involving more than one half of the surface of the body, is pretty sure to be fatal, while death may be expected in a majority of cases where only one third the body is burnt. Death may ensue at three different stages of the wound:—the periods of irritation, inflammation and suppuration, and at each different stage the mode of death is different.

I. *Causes of Death in the Period of Irritation.*

A. Paralysis of the Central Nervous System.—This is probably the result of the shock experienced by the nervous system at the time of the reception of the burn. It is of brief duration, and often passes unnoticed.

B. Congestion of the Internal Organs.—Immediately after the accident, a reaction, more or less violent, takes place, characterized by congestion of the encephalon and its membranes, of the lungs and pleura, and also of the alimentary canal and peritoneum, accompanied often by sanguineous exudations upon the lungs and heart.

II. *Causes of Death in the Stage of Inflammation.*—These are the internal inflammations, induced by the cutaneous inflammation, and having their seat, commonly, in that organ situated the nearest to the burn. Meningitis and encephalitis are relatively rare; pneumonia is much more frequent, as are also pleurisy and pericarditis. Gastro-intestinal inflammation is an unusual accompaniment, and, when it occurs, its seat is usually in the duodenum. Another lesion, noticed almost invariably in the duodenum, is *ulceration*, analogous to the round ulcer found in the stomach. This may advance to perforation, and thus induce peritonitis; or the destruction of a vessel may take place, and death may then result from hæmorrhage. To account for the peculiar localization of this lesion, we are forced to resort to various hypotheses; some pathologists connecting it with the situation of Brunner's glands; others ascribing the ulceration to embolism; and others still to some chemical change in the constituents of the bile. In some instances, tetanus has been observed in this stage of a burn.

III. *Causes of Death in the Stage of Suppuration.*—These are exhaustion, pyæmia, septicæmia, renal disturbance accompanied by anasarca, and intestinal hæmorrhages.

Death has been known to take place suddenly, without any appreciable cause, even after complete cicatrization of the wound had taken place.

Bibliographical Notices.

Wharton and Stillé's Medical Jurisprudence. Third Edition. Vol. II. Parts First and Second. Philadelphia: Kay & Brother. 1873.

A WORK of this character is an exceedingly difficult one to review, consisting, as it does so largely, of cases quoted from various sources, the author being responsible only for their correct abridgement and proper arrangement. In the work before us, material is abundant, and, what adds vastly to its value, easy to get at, both from the excellence of the arrangement and the completeness of the indices. The practitioner could hardly place in his library a book to which he could turn with more confidence that he would find therein a satisfactory statement of opinions and facts upon any point within the extensive range of medical jurisprudence.

The second volume is divided into "books," several of the more important and more strictly medical of which have special editors. The chapters relative to the fœtus and new-born child and to the difference of sex are by Samuel Ashhurst, M.D.; on poisons, by Robert Amory, M.D.; on wounds and signs of death, by Wharton Sinkler, M.D., and the remainder by Francis Wharton, LL.D.

Upon comparing the present edition with that of 1860, it appears that a considerable proportion of the revision has been expended in the direction of abridgement, some cases being reported much less fully than at that time. This, however, has been more than compensated, and the book now appears in volumes of a decidedly medical appearance instead of the one portly and yellow legal work of 1860. It would be easy, of course, by a little search, to point out instances in which more or different cases might have been cited, but it would be mere hypercriticism in most places to do so, since we find no point left without as much authoritative support as its importance demands. We notice, however, a few places in which recent decisions do not agree with the doctrines advanced in the work under consideration. The opinion of Casper and others, which seems to be approved by our authors, that marks of tattooing may disappear, does not agree with the testimony of the medical witnesses in the Tichborne trial, as reported in the papers.

The section on poisons, which is one of the more strictly medical ones, is really complete, and occasionally even tends to superfluity, since it includes, for instance, lactuca and dulcamara, from neither of which has a fatal case of poisoning been reported in man. There are many more or less poisonous, indigenous or cultivated plants which are not specified in the section, but they have probably never been the occasion of legal investigation.

The present editor of this subject has added chapters upon chloral and nitrous oxide, subjects upon which his own investigations enable him to speak with authority, and which, we cannot doubt, will, sooner or later, possess a legal as well as scientific interest, if they have not already done so.

Since the statement was made (1872) that "there has been, as yet, no reliable record of death immediately caused by the use of this (nitrous oxide) anæsthetic gas," a case has been reported, in England, of a lady who died while taking the gas for the extraction of a tooth, and in the presence of her family physician. (*Lancet*, Feb. 1873.)

We observe that both in the last and present edition, the stories of arsenic eating in Styria are treated as if a little apocryphal, although in the present edition a case is cited where the arsenic was actually swallowed in the presence of Prof. La Rue. The observation of Dr. Maclagan should have found a place here. He not only saw how well known arsenic eaters take their dose of several grains, but had some of their urine collected from which the drug was subsequently recovered by a chemist. (*Edinburgh Med. Jour.*, Sept. 1867.)

The writer cannot agree with the statements as to the symptoms of chloroform taken by the stomach. He has seen a case terminate fatally in about half-an-hour after the ingestion of two ounces, the first ounce being mixed with wine. The patient when first seen was in a condition of deep narcotism. Under the head of conium, it seems as if the well known case observed by Bennett were too thoroughly observed not to deserve a place.

The number of subjects treated in this volume is by far too great to permit more than an allusion even to the most important. In the section upon the distinction of human from animal blood by the microscope, we observe that the opinion of the author (this passage is the same in the present edition and that of 1860) is that "the blood of an ox or sheep cannot, by the microscope, be, for medico-legal application, distinguished from that of a human being, for, although the globules are somewhat smaller than those of human blood, yet the size of the globule of human blood varies according to whether it is fresh or dried, and the difference between its size in man and animals is too slight to be made a point of evidence where such momentous consequences may depend upon a decision." The editor gives, however, full weight to the other side, and numerous citations of authorities.

The chapters on pregnancy and abortion, survivorship, identity, wounds, signs of death and malpractice are all exceedingly interesting and well fortified with citations.

The meagreness of our criticism may be taken as some slight evidence of the thoroughness of the work. In a literary point of view we notice only a few trivial points for remark. In section 644, it seems doubtful whether Dr. Taylor or Dr. Hassall had ground many cwts. of cocculus indicus "to go into the poor man's drink." It is a relief to find, on referring to the original, that neither of these respected gentlemen were guilty of such exceedingly unprofessional conduct.

We notice, in the last passage in the book, a prevalence of the "will" which in warmer latitudes so frequently replaces the northern "shall." This passage, however, we quote in part, wishing it might be read and pondered by our legislators in preparation for the time when they will again be called upon for a law which shall relieve expert testimony from its present exceeding bad repute. The author advocates the appointment of government experts, and says: "The official physician who acts as referee must be placed under judicial restraints. He should owe his appointment to neither party, but to the State, irrespective of any particular case. His duty it should be to take testimony, if needed on the case, and to hear counsel, so that he will be in no danger of hazarding one of those rash and ignorant opinions which have so much disgraced this branch of medical practice. After thus judicially hearing the case, it should be his further duty to judiciously certify his opinion to the court by whom the reference is made." * * * "We should (then) soon know whether there is such a thing as moral insanity, and whether it is practicable to distinguish human blood, after the expiration of a week from the period of its drying. Settle a few such points as these, and we relieve criminal justice of a large part of the uncertainties by which it is now beset, and we will have a series of rules by which such cases can be intelligently, consistently, and humanely conducted. Nor will this be all; we will be able to get the judicial utterances of science as to vexed issues of fact, instead of the interested arguments of experts who are virtually employed as counsel by the party calling them, or the wild utterances of philosophic monomaniacs, who are called simply because of their absorption in some unique theory of their special concoction. Such men need not be silenced. Experts as counsel, indeed, will find a proper and important office in presenting the two sides of the issue to the expert who acts as referee. But the expert who fills this last post will be disembarrassed of all personal relations. He will have no client to serve, and no past partisan extravagances to vindicate. He will render his opinion as the advocate neither of another nor of himself; when he speaks he will do so judicially, as the representative of the sense of the special branch of science which the case invokes, governed by the opinion of the great body of scientists in this relation, and advised of the most recent investigations. When this is done, we will have expert evidence rescued from the disrepute into which it has now fallen, and invested with its true rights as the expression of the particular branch of science for which it speaks."

Contributions to Practical Surgery. By George W. Norris, M.D., late Surgeon of the Pennsylvania Hospital, Vice-President of the College of Physicians of Philadelphia, member of the Société Médicale d'Observation of Paris, &c. Philadelphia: Lindsay and Blakiston. 1873.

The first contribution is on non-union of bones after fractures—its causes and treatment. Dr Norris first describes the normal mode of osseous union, and then the appearances in cases where perfect osseous union has failed He divides the latter cases into four classes: first, when the union is by fibro-cartilage; second, cases of entire want of union with extreme mobility of the fragments; third, union by ligamentous bands as in the patella and olecranon; and fourth, when both ends of the bone are contained in a dense capsule, having a sort of synovial lining membrane, a false joint. The causes of non-union are then considered. Among the constitutional causes are enumerated syphilis, cancer, scurvy and advanced age. Among the local causes, frequent motion of the affected limb from whatever cause, from apposition of the fractured ends, interposition of foreign substance between the fragments, tight bandaging, too early use of the limb. Union, however, fails sometimes where the most perfect rest and apposition of the fracture have been maintained. The remarkable case of absorption of the humerus going on for twelve years, the dissection of which was described by Dr. Porter in this JOURNAL last year, is mentioned. The methods for the cure of ununited fractures are considered very fully; labor and patience in consulting authors and collecting cases have not been spared by Dr. Norris. The forty pages containing the detailed descriptions of these methods and the experiences of surgeons are extremely valuable. A table of 150 cases of operation for ununited fracture, with the chief points of each individual case, fitly closes this essay. Next comes a chapter on deformities after fracture and the plans of removing them. The statistics of fractures and dislocations treated in the Pennsylvania Hospital during the twenty years from 1830 to 1850 are then given. The method of treating each kind of fracture is detailed. A modified Desault apparatus was generally employed, but lately the weight and pulley with extension straps of adhesive plaster have been used. The number of fractures in these twenty years was 2,208. The most numerous were those of the leg (611), next, those of the arm (579), next, of the thigh (266). The ununited fractures were 18; of these 11 were cured, 5 relieved or removed by friends, and 2 died. Of the dislocations, there were 177, 101 of the shoulder and 21 of the hip. Compound fractures are treated of in a clear and practical manner. A statistical account of amputations performed at the hospital in the ten years, from 1850 to 1860, are then given in a table. Of these there were 228, with a mortality of 55. Statistics of the mortality following the ligature of arteries are then given, and the volume closes with an account of the treatment of a case of varicose aneurism at the bend of the elbow. These " contributions " by Dr. Norris are exceedingly interesting and valuable. The patience and labor expended, to say nothing of the time consumed in collecting and arranging the statistics, must have been very great, and the detailed accounts of the various methods of treatment of recent and compound fractures will be found extremely useful to the practical surgeon. It is to be hoped that a like work will be performed for all our large hospitals, so that the immense mass of experience in different modes of treatment may be made known and utilized for the general good. J. H.

BOOKS AND PAMPHLETS RECEIVED.

Treatise on the Diseases of the Eye, including the Anatomy of the Organ. By Dr. Carl Stellwag (von Carion). Translated from the Fourth German Edition by D. B. St. John Roosa, M.D., Charles S. Bull, M.D., and Charles E. Hackley, M.D. New York: William Wood & Co. (From A. Williams & Co.) 1873. Pp. 915.

The Student's Guide to Medical Diagnosis. By Samuel Fenwick, M.D. From the third revised and enlarged English Edition. Philadelphia: Henry C. Lea. 1873. Pp. 328. (A. Williams & Co.)

An Essay on the Principles of Mental Hygiene. By D. A. Gorton, M.D. Philadelphia: J. B. Lippincott & Co. 1873. (From A. Williams & Co.)

Mind and Body. The Theories of their Relation. By Alexander Bain, LL.D. New York: D. Appleton & Co. 1873. Pp. 196.

The Medical Profession in all Countries. Photographic Portraits from Life. No. 9, September, 1873.

Boston Medical and Surgical Journal.

Boston: Thursday, October 30, 1873.

The rapid increase in the population of Boston, caused by the development of its commercial resources, as well as by the systematic process of annexing the adjacent towns, must soon render the existing hospital accommodations of the Metropolis quite inadequate. The waiting-rooms and wards of the different hospitals and dispensaries are, in fact, already overcrowded, and further provision for patients is absolutely necessary. The medical profession, as well as the public, are, therefore, to be congratulated upon the establishment of a new dispensary, under the charge of Dr. James R. Chadwick, to be devoted exclusively to the treatment of diseases peculiar to women.

It is hardly necessary to allude to the important advantages that must accrue to medical students from the opportunity that will here be afforded them of making themselves familiar with this important class of diseases. Young practitioners, likewise, who may not have had the privilege of pursuing their studies where *cliniques* for the observation of these diseases are already established, will here have the chance to remove a serious educational defect.

A correspondent of the *Pall-Mall Gazette* states that Sir William Grey, late Governor of Bengal, devised a system of "training up a body of local practitioners able to apply simple remedies to ordinary diseases, such as cholera, smallpox and epidemic fevers." Meeting often with great epidemics which decimated the adult population in the most populous and richest districts of Bengal, he caused vernacular medical classes to be formed, which the past three years have proved to be a success. In the Medical College of Calcutta, there are now 1400 students, and their numbers increase every year. Of these, 500 receive a high education through the medium of the English language from accomplished European professors. Some 800 obtain a less complete medical education in the Bengali language, from competent native teachers. Other pupils from Northern India receive the same education in the Hindustani tongue. The success of the Calcutta Medical College has led to a demand for vernacular medical schools at other places throughout Bengal.

The various medical journals of Great Britain show a commendable interest regarding the sanitary condition of the troops who are to engage in the Ashantee war, and it seems that the government intends to neglect no precaution which is likely to lessen the mortality which disease will inevitably bring to those who compose the expedition. Says the *Lancet*, "It is probably for the first time in our military history that a thoroughly workmanlike, comfortable attire has been provided for the soldier—one that will protect his person without encumbering him by its weight or embarrassing him by its tightness about the neck and chest." Large quantities of jams, jellies and medical comforts, as well as medicines, have been sent out. The supply of ice is ensured by the consignment of a ton of freezing salt delivered by a patent ice company of London. Large and small filters have been provided in abundance to counteract as far as may be the foul condition of the water on the Gold Coast. It is to be hoped that the war will be vigorous, short and successful.

It seems a pity that the commander of the expedition, Sir Garnet Wolseley, and his staff should have been unfortunate in their start. These officers embarked from England in a steamer of which the cabins had been recently painted, so that they were subjected to a process of poisoning with lead and the products of the bilge. Their food, also, suffered from the damaging effects of a leakage through the deck.

THE *Richmond and Louisville Medical Journal* speaks boldly and justly on the cure for quackery. "There is but one remedy; it is a radical one, powerful, entirely efficient, if it be used. This is the medical press. Unfortunately, most of these presses are afraid to deal with this stupendous evil, and are as cowardly as most medical societies. Those presses that use every means to suppress charlatanism are abused and maligned, and have the most despicable motives attributed to them. . . . . . It remains to be seen who are the strongest, the medical quacks and the scamps sustaining them, or the medical press."

DISLOCATION OF THE SPLEEN. By A. R. KILPATRICK, M.D., Navasota, Texas.—The displacement, or dislocation of the spleen occurs so rarely, and is so seldom mentioned by authors, that probably some of the readers of the *Record* may have their doubts of there being such a pathological fact.

Dr. Robley Dunglison, in his "Practice of Medicine," mentions one case he saw *post-mortem*, and reports it as a rarity. He found the spleen broken loose from its attachments, resting with its convex surface on the brim of the pelvis—the lower extremity being turned up in the right lumbar region, suspended by its vascular and peritoneal attachments, and easily movable in every direction.

In April, 1867, I attended a young widow here who was sick with intermittent fever, complicated with deranged uterine function. She was the mother of two children, and was about twenty-five years old.

She had lived in Eastern Texas, and suffered for years with different diseases, mostly, though, malarial fevers. She was poor, and had to cook and do all household work. In course of treating her case, I examined the abdominal contents, and as she was lean, the abdominal walls thin, all the viscera could be felt. I expected, on the first examination, to find a large spleen, but being disappointed, I asked her if she had ever had "fever cake," and she said she had, years ago, and the doctors had treated her for it; but of late she had no trouble with it.

Pressing in the region of the uterus and bladder, I found the spleen there lying very much in the position given above by Prof. D. I am sure I was not mistaken; I found no sign of the organ in its proper place. The spleen could be easily traced out by the fingers, and was not much above the ordinary healthy size and length in the adult. Moving it or pressing on it produced no undue pain. She could give me no satisfactory account as to its dislocation. The woman moved away and died, I heard, of yellow fever, in the summer or fall, as there was an epidemic that year.

In June, 1868, while attending a black woman, who had several children, some of them grown, I found her spleen dislocated and lying exactly in the position of the foregoing case. She was also lean and thin, and the digital examination could easily trace out its size and situation. She also suffered no pain from handling, moving or pressing on the organ; it was evidently not diseased then, but she had no knowledge of when the dislocation occurred. She had been a slave, belonging to a sugar planter in Louisiana.

In 1866, a young lady of this place, who had a large spleen, was attempting to get up in a light wagon, when she was suddenly seized with a very sharp, lancinating pain in the spleen. She had to be helped back into the house, and required medical assistance. Dr. Barnett was called in, and found the spleen entirely below the ribs, leaving a space of more than two inches between the upper edge of the spleen and the ribs. It was very large, and occupied the pelvis, and felt like the gravid uterus. Her clothes were loosened, and her body placed on an inclined bed, elevating the posts so as to make the head much the lowest; then, by pressure and continued manipulation, similar to the taxis in reducing hernia, it was restored to its position and secured by bandages. She was kept in bed and the bandages attended to a few days, when she recovered entirely, and has not been troubled with the spleen since.

I have heard of another case in a married woman in Falls county, who is the mother of three children. She has suffered with enlarged and painful spleen several years. It finally has become dislocated, and now occupies the pelvis and feels like the gravid uterus. Since the dislocation she has aborted several times—in fact, has not brought a child to term since. The spleen must weigh nine pounds, and by its pressure on the uterus and on the large bloodvessels has entirely impaired her health. The displacement came on gradually, and probably was facilitated by parturition.

These cases are reported partly as curiosities of medical experience, and partly to direct the attention of the profession so as to elicit further observation.—*Southern Med. Record.*

Correspondence.

"COTTING'S OPERATION FOR INFLESHED NAIL."

MESSRS. EDITORS,—Although many are ready to show that themselves and others have performed this same operation years and years ago, yet we think Dr. Cotting is entitled to have his name connected with it as the one who brought it before the profession fully explained and illustrated for the first time.

In May last, we operated on a "letter carrier," who, in his regular rounds, walks from twelve to fifteen miles daily, back and forth across cobble-stone paved streets, up and down stairs, &c., a case where the success of the operation was unusually well tested. He had been unable to use his foot for four weeks before we saw him, had been poulticing and trying to get the nail out of the flesh, &c.

After operating, we dressed with lint and warm water. His sufferings immediately ceased, and, the third week after, he made one trip daily, and the fourth week found him doing full duty, which he has done since. The toe is sound and tough, although the preceding inflammation caused the foot to remain swollen for nearly three months after the operation.

One word as to the operation itself. We think it has been too complicated and severe, as directed by some surgeons. It is no more severe or lengthy than extracting a tooth, in our hands; being done by one sweeping cut with the common curved narrow bistoury in the pocket case. We see no necessity for transfixion and double flap cutting, directed by one surgeon, &c. We enter the heel of the blade a little back of the root of nail, cutting forward and inward until we strike the edge of the nail, then carry the knife perpendicularly along edge of nail to end, exposing edge of nail for three fourths its length. In case the first cut was not sufficient, we should not hesitate to take off another slice, but that is never necessary, as there is little danger of taking off too much, and nothing to hinder taking off a free slice.

We hope all jealousy, if there should be any, may cease, and that every edition and new work on surgery will mention this method as *the* operation for "ingrowing toe-nail," as it deserves to be. X.

THE CAUSE AND PREVENTION OF YELLOW FEVER.

MESSRS. EDITORS,—Probably no subject within the whole range of medical science has furnished a more fruitful theme for the pen of the medical writer than the dire form of pestilence known as yellow fever. To become familiar with the literature of this malady would require the work of years. It is, indeed, no light task to read even the titles of the numerous essays and the title-pages of the various books which have been published in several languages on this subject, for these treatises are numbered by thousands.

The first glance at this long catalogue of books, and the imposing array of illustrious authors, impresses one that the subject must already be exhausted, and that the attempt to add anything new or valuable would be presumptuous.

And yet, on a closer examination, as we turn from page to page, and from volume to volume, of this vast library, in search of information on certain points, we do not find that unanimity of opinion among these authors which evinces positive knowledge. There is, it is true, very little controversy among them concerning the signs by which this fever manifests itself, or in regard to the local lesions that are to be observed in *post-mortem* examinations of fatal cases; and in regard to the treatment to be pursued, practitioners are no more at variance on this than on many other diseases.

But if prevention is better than cure in other cases, it is emphatically so in this; and the question of the cause and prevention of this disease is paramount to all others concerning its symptoms, pathology and treatment.

Let us, then, inquire, *What is the specific cause of yellow fever?* This is an open question; very open, one may say, for unfortunately the "doctors disagree" on this most vital point. Their answers to the question are contradictory, and, consequently, of little practical value.

One author contends that the fever is caused by volcanic eruptions; another, that it owes its origin to a lack of electricity in the atmosphere; while a third asserts that it is caused by the plant-growth principle being in excess of the actual demand of the growing vegetation; some attribute it to heat, others to moisture, and some to the two combined; many suppose it to arise from the exposure of fresh earth, as in the excavations for cellars, wells, &c., in certain seasons of the year; the decomposition of animal matter, also marsh miasm, are assigned by several writers as the cause of the disease. Dr. E. D. Fenner, of New Orleans, who has probably had a more extensive observation of the rise and progress of this fever, and more experience in its treatment, than any living American, says, in italics, in his Southern Medical Reports, that he believes that "*yellow fever is only one of the forms or types of endemic, malarious fever* witnessed almost annually in this city."—Vol. i. p. 33. Dr. La Roche, the most voluminous of American writers on yellow fever, after reviewing these supposed causes of the disease, states his reasons for rejecting all of them, and advocates the theory that decaying wood, under certain circumstances, has the power to develope the fever. The late Dr. Barton, from extensive observations made during the severest epidemics in New Orleans and vicinity, is very positive that this fever is occasioned by disturbances of the soil, and by filth of various kinds acted upon by heat and moisture; among the kinds of filth enumerated by Dr. Barton as abounding in various parts of the city, and probably causing the outbreak of the fever, are coal tar, molasses leaking from barrels on the wharves, stagnant water in the yards and gutters, offal and refuse from slaughter-houses, stable filth, neglected privies and drains from sinks and water-closets, dead animals decaying along the river banks, and emanations from the vaults and tombs of the city grave yards.

This latter theory of Dr. Barton's is the one most generally adopted by the community at large, both in the medical profession and out of it; and, without doubt, it contains the true theory in a general way, and mixed up with much that is erroneous, but it is too vague and general to be available. And still the boards of health are asking in vain, in which particular substance in the filthy city lies the germ of the disease? What kind of soil is that which, if disturbed, fills the atmosphere with pestilence and death?

Guided by observations during a residence of twelve years in the yellow fever region of the United States, during which time I have visited the West Indies and every town and city where this fever has prevailed, on the Atlantic, on the Gulf coasts and on the Mississippi River, and aided by such histories of the great epidemics as I could conveniently reach, I have arrived at this conclusion in regard to the nature of the cause of the disease in question:—The specific cause of yellow fever is a malaria arising from the decomposition of human excrementitious matter in an atmosphere of a constant high temperature. Moisture and stillness of the air contribute toward rendering an epidemic more intense and fatal; the latter by allowing the poisonous miasm to accumulate, and the former by facilitating its conduction to the lungs.

There is reason to believe that genuine yellow fever, attended by black vomit, may be artificially produced, on a small scale, even in the midst of an Arctic winter, by maintaining the conditions above named, and confining persons within the heated atmosphere for a few weeks.

This new discovery of the cause of yellow fever explains all the unusual phases of the disease, such as its appearing in a South American city for the first time; its ravages in the low marshy region of the delta of the Mississippi and on the high bluffs up the river; it accounts for its origin on shipboard on mid-ocean, and on the high dry rock of Gibraltar; also for the sporadic cases which take off but a single victim, as in the case of General Mitchell, at Port Royal, in 1862, as well as for the pestilential wave that sweeps over a whole city, like that at Shreveport at the present time.

It is to be hoped that practical applications of this discovery will soon be made in all places where the yellow fever is now prevailing. The key to the secret of preventing and arresting the pestilence is the knowledge of its cause; armed with this knowledge, health officers will find means to remove the cause. It may not be amiss, however, to suggest that antiseptics, or such articles as retard or prevent the putrefactive and fermentative processes, should not be used. The fermenting and decay are the very things we wish to promote; consequently, lime and chloride of lime are better for throwing into privies. But the best substance known for this purpose is proverbially the cheapest thing—*dirt;* dry dust, and ashes, and dry fine clay. These hasten decomposition and absorb all the noxious gases.

As the cleaning out of privies in a southern city in hot weather might originate an epidemic, and would always increase its fury if already existing, such work must be postponed until colder weather. The contents of such places should be covered several inches deep with dry earth, fine dry clay or ashes. If the drains from the water-closets cannot be purified, these institutions should be entirely closed up until cold weather. From the hour that this is done, and the formation of the peculiar malaria ceases, the force of the epidemic will decline; but, of course, it will not entirely disappear until the accumulating miasm that hangs like a fog over the city is moved off by the winds and diluted by the atmosphere beyond the infectious point.

No harm will result from any amount of excavations in the ground outside the city limits. The soil which it is dangerous to disturb is that on the surface, which is saturated with the filth above mentioned, as in many of the streets and yards of all cities. It has always been noticed that during an epidemic the business of grave and well digging is as healthful as any other.

J. M. Hawks.

The assumption of the Function of the Physician by Apothecaries.

Messrs. Editors,—Every physician is aware of the fact that apothecaries are in the habit of prescribing medicine when they should confine themselves to dispensing it. In acting thus, they do an injustice both to the persons who apply to them and to the medical profession; for they are not educated as physicians, and these persons are, for the most part, not impecunious, but are able to pay a physician for his advice. Neither are the ailments for which apothecaries prescribe always trivial, but they are, not rarely, of considerable gravity. This custom has grown to such proportions, that many physicians of Boston have discussed, privately, the feasibility of establishing pharmacies in certain localities in the city and putting them in the hands of competent persons, who should be put upon their honor not to encroach upon the province of the physician. A better way, perhaps, would be to encourage some honest, capable pharmacists to assume the responsibilities of such establishments. The majority of the regular physicians of the city proper would gladly send their prescriptions to these pharmacists, and handsome incomes would, undoubtedly, be derived from this patronage.

My thoughts recurred to this subject lately, upon seeing, in the window of an apothecary on Beacon Street, the show-card of one Humphries, who manufactures so-called "Homœopathic Specifics," and a large case of the "Specifics." This apothecary has received a very large amount of business from the physicians in the central part of the city. Their duty in the premises is plain, but I wish to ask if the selling of homœopathic remedies by apothecaries is not the straw which breaks the camel's back? Is it not time to encourage the establishing of respectable pharmacies?

Boston, October 15, 1873. Beacon Hill.

Medical Miscellany.

ANOTHER death from chloroform in Cincinnati.

THE Spectacle Island Nuisance, which has occasioned much discussion for several years, has at last been referred to the city Board of Health.

THE Howard Association found it necessary to reduce the pay of nurses at Memphis from five to three dollars a day, whereon three hundred and twenty-five struck. They carried their point, of course, but, let us hope, a day of reckoning will come for such contemptible conduct.

AN ODD EFFECT OF HYPODERMIC ATROPIA.—In a note from Dr. Geo. N. Monette, of New Orleans, he says he recently injected into the left arm of a young woman suffering from muscular rheumatism the third of a grain of morphia and the sixteenth part of a grain of sulphate of atropia. In a few moments after, a scarlet rash appeared on, and was limited to, the right side of the body.—*American Practitioner.*

THE process of incineration has received a slight encouragement on the Continent from the formation of a club at Hamburg, each member of which, on entering, makes a provision in his will that his remains are to be burned after death.—*Med. and Surg. Reporter.*
This strikes us a waste of raw material.

To prevent hydrophobia, the wound should be washed as soon as possible with warm water; the whole of its surface should next be blackened with Indian ink, and this washed out till not a trace of color remains. This process is to be repeated twice, and then lunar caustic applied over the whole surface of the wound. The application is to be repeated as often as the wound begins to heal, so as to keep it open for two months, and the system is to be kept slightly under the influence of mercury for the same time.—*London Medical Record.*

COD-LIVER OIL BREAD.—With a view of overcoming the repugnance of some patients to cod-liver oil, M. Bouchut has sought to mask the taste of the oil by incorporating it with flour and making a kind of bread of the mixture. This bread is described (*Répertoire de Pharmacie*, N. S., i. 425) as not in any way disagreeable, and its success during several weeks is stated to have been very encouraging.—*London Medical Record.*

EXTRACTION OF RENAL CALCULUS MORE THAN A CENTURY AGO.—The following is an extract from a letter to the *New York Med. Record:*—
DEAR SIR,—In a rather scarce book called "Mems., Maxims, and Memoirs, by William Wadd, Esq., F.L.S., Surgeon Extraordinary to the King, London, 1827," I find, on page 21, the following note or memorandum:—
"Mr. Paul, a surgeon at Stroud, in Gloucestershire, lately extracted from the kidneys of a woman, by an incision through her back, a rough stone as large as a pigeon's egg, and made an entire cure; it is the first of the kind ever performed in this kingdom.—*Gent's Magazine*, Aug., 1733."
Yours truly, J. H. POOLEY, M.D.

IN a paper on the Action and Sounds of the Heart, read before the British Medical Association, Dr. George Barton maintained that it was a mistake to believe that the ventricle is dilating when the arterial systole takes place. He summed up his views as follows:—1. The distended aorta reacts in immediate connection with the ventricular systole, crossing the sigmoid valves as its impulse is imparted to the wave. The sound produced in closing the sigmoid valves terminates the first sound of the heart. 3. The second sound is produced by contraction of the auricles, as they propel the blood through the auriculo-ventricular foramen, distending the ventricle. It appears to follow the first sound, but represents the commencement of a new beat.—*The Doctor.*

Last year there were in England 1,455 coroner's inquests for suicide or self-murder—1,057 men and 398 women. According to official tables recently issued, there were, last year, 740 cases of attempted suicides, or one to 31,181 of the estimated population. In London there were 405 cases.—*Dublin Med. Press and Circular.*

Patronesses of Quackery.—Since the days of St. John Long, when duchesses entered the witness-box to depose to the marvellous effects of that impostor's liniment, there has always been an irresistible attraction for the ladies of the upper ten thousand in any delicate bit of quackery. Globules are *distingué.* There is none of the grossness or materialistic appearance which belong to an apothecary's bottle, globules and dilutions being to medicine what the fragrance of an herb is to its medical potency. It is interesting to be in delicate health, and, under homœopathic guidance, that ladylike characteristic may be indulged without the discomforts of nasty bottles. Accordingly, the *crême de la crême* are, at least, professing homœopaths, and we observe from the prospectus of a Homœopathic Bazaar that titled patronesses are neither scarce nor undistinguished. H. R. H. the Duchess of Cambridge leads off, supported by five other duchesses. Five marchionesses follow, among whom are especially notable the Marchioness of Westminster and the Marquise de Caux (Madame Adelina Patti). Next we have ten countesses and nine viscountesses, the Countess Granville leading this division. Then we find about fifty "ladies" or "baronesses," including such names as Ebury, Elcho, Lawrence, Rotchschild, Seymour, Havelock, Erskine, &c. The mere honorable and untitled ladies who bring up the rear are grand enough to shed lustre on any ordinary cause, including as they do such names as Mrs. Milner Gibson, Mrs. Knatchbull-Hugessen, and others whose husbands' names are linked with wealth, talent or fashion.—*Dublin Med. Press and Circular.*

NOTES AND QUERIES.

"Ecclesiastical Council.—The council held a secret session in the evening, and will announce the decision this afternoon." (See daily papers.)

Where were the reporters? Has "newspaper enterprise" declined since the prying into the councils of the Massachusetts Medical Society? Pellet.

Query.—Can any one tell a good and speedy way of producing counter-irritation, without disturbing the bladder, and at the same time cleanly? X. P. Q.

Mortality in Massachusetts.—*Deaths in fifteen Cities and Towns for the week ending October* 18, 1873.

Boston, 139—Charlestown, 13—Worcester, 14—Lowell, 32—Chelsea, 8—Cambridge, 17—Salem, 14—Lawrence, 8—Springfield, 3—Fitchburg, 4—Newburyport, 1—Somerville, 6—Fall River, 38—Haverhill, 6—Holyoke, 6. Total, 309.

Prevalent Diseases.—Consumption, 61—cholera infantum, 29—scarlet fever, 21—typhoid fever, 20.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, Oct. 25th, 120. Males, 61; females, 59. Accident, 2—apoplexy, 1—inflammation of the bowels, 1—bronchitis, 2—congestion of the brain, 1—disease of the brain, 4—cancer, 1—cerebro-spinal meningitis, 1—cholera infantum, 9—consumption, 7—convulsions, 3—debility, 3—dyspepsia, 1—diarrhœa, 5—dropsy, 4—dropsy of the brain, 4—drowned, 1—dysentery, 2—diphtheria, 3—exhaustion, 1—erysipelas, 1—scarlet fever, 7—typhoid fever, 10—"frost-bite of leg," 1—gastritis, 1—disease of the heart, 2—hernia, 1—intemperance, 1—disease of the kidneys, 1—disease of the liver, 1—congestion of the lungs, 2—inflammation of the lungs, 6—marasmus, 6—old age, 3—paralysis, 3—premature birth, 2—peritonitis, 2—puerperal disease, 4—scrofula, 1—stricture of the urethra, 1—disease of the spine, 1—teething, 1—tabes mesenterica, 1—whooping cough, 2—unknown, 3.

Under 5 years of age, 55—between 5 and 20 years, 8—between 20 and 40 years, 32—between 40 and 60 years, 14—over 60 years, 11. Born in the United States, 81—Ireland, 27—other places, 12.

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LIFE AND DISEASE.

By Alfred Hosmer, M.D. Harv.

Read before the Massachusetts Medical Society, June 3, 1873.

Although the records of mortality not unfrequently present instances of marked longevity, it is, nevertheless, safe to assert that the majority of deaths do not occur in obedience to the inexorable law of self-limitation, which puts a period to the greatest possible length of human life. The results accruing from a more exact appreciation and a better application of the principles of science, both medical and sanitary, prove that in the past, at least, even if it be not true of the present, although individual existence cannot be indefinitely prolonged, the average duration of life has fallen considerably short of what might have been attained.

On the one hand, then, life implies death, and that in two senses; constantly, in that every organic effort disturbs the vital connections of a certain quantity of tissue material; ultimately, in a mode that needs no description. The time at which death takes place may be accidental—and I wish the word to suggest something besides mechanical violence or active poison; it is often premature, through some one of the numerous forms of disease; it is rarely, if ever, natural from simple senility. I say rarely, if ever, natural, for we have ceased to expect in the structure of the human frame such uniform perfection of all its parts that death shall not be a process involving a series of consecutive changes, but a rapid and simultaneous abolition of all those functions whose integrity is essential to the phenomena of healthy life.

On the other hand, fatal disease, with its diversity of character and location, and its infinity of phases with nominal identity, stands in a very close relation to life, giving that word a broad and comprehensive definition.

I believe that every act which an individual performs, though it be as simple as eating, sleeping, or any ordinary form of exercise; every effort which he makes, be it mental or physical, and every variation in the time and manner of performing that act or making that effort, constitutes an influence or agency which modifies his whole subsequent existence. And his relation to health or disease at any instant involves no small degree of personal responsibility, and is the product of two factors, of which one is his congenital condition, and the other the combined result of all those influences which have successively affected him. Those influences may be such as he has created or selected for himself, or may originate in agencies beyond his control. Modes of life play a most important part in the determination of the quality or degree of health, and the quality of health underlies the duration of life. Fatal disease is often not simply the termination but the result of life, as parturition is the result as well as the termination of utero-gestation. This comparison I use simply for the illustration of an idea, and not for the purpose of furnishing arguments from analogy in support of it. But to give it all possible force I will insist upon two points. Whatever it is that initiates the parturient movement, it is something connected with the process of gestation. There is also something else in that process, acting perhaps at and from the instant of conception, which decides what in loose language we are disposed to regard as the accidents of the fœtus, its sex, weight, proportions, presentation, position. The most limited obstetric experience recognizes the intimate connection between these elements and the character and results of labor.

The broad proposition here laid down may seem bold and untenable to those who claim that the system is intended to resist all impressions of moderate force. But the view that men may live themselves to death, although the expression has a paradoxical sound, is in complete harmony with the simple theory which has not yet been invalidated or superseded by a more acceptable one, the theory which declares that disease forms a part of the plan of creation, and intimates that some provision for its development has been incorporated into the very nature of man's constitution.

The position assumed stands upon some of the simplest and strongest facts of the human economy. For instance, disease induces atrophy; insufficient use interferes with growth and invigoration; over-use leads to exhaustion. Proper use not only increases strength and enlarges capacity, but is indispensable to all high development, as tension is essential to the manifestation of elasticity in materials which possess that property. Fortunately, what constitutes proper use is not judged by the standard of a geometrical line, but the terms can be applied with no small latitude of meaning. The same numeral does not always represent the specific gravity of the urine in health, and this is true also of the frequency of the pulse. As every voluntary act implies some degree of use, it follows with logical necessity that such act must cause some change in the system, favorable or unfavorable, with reference to its susceptibility to morbific influences, and its reactive power under existing disease. When we consider that the system is in such unstable condition of perpetual change that even the exact weight of the body cannot be a constant quantity, and that there is such unceasing variation in the balance between constructive agencies and destructive processes that the antagonistic forces which play within and upon the body are in apparent equilibrium only, we realize a state of things which affords the best possible opportunity for the influential action of trivial agents.

We may seem to invest with undue importance things which are commonly adjudged to be insignificant and of no account. But the law of gravitation assigns a part in the exhibition of force to every atom in the universe, and attributes the same quality alike to invisible particles and gross masses. Repetition, like the longer arm of a lever, can give visible efficacy to the slightest manifestations of power of which the single expressions seem as nothing, and the results of daily observation abundantly illustrate the rule of cumulative influence. The decisive character of the last ounce, the last blow, or the finally successful effort, is largely derivative. A single gluttonous indulgence does not suffice to establish a chronic dyspepsia. A single excess will not explain an attack of delirium tremens, and one alcoholic draught will not, with an ordinary predisposition, excite a paroxysm of gout. What I would call an artificial phthisis, in contra-distinction to one that is natural and inevitable, does not come from a brief exposure to those causes which undermine nutrition and determine physical deterioration. It may be remarked that the magnitude of the element of personal accountability, which enters into the matter of the time and mode of decease, converts a considerable portion of mankind into suicides; and so it is. The intrinsic nature of crime has no reference to rapidity of commission. Suicide does not necessarily imply violent or speedily effective measures; but it does properly include every voluntary act of the individual which shortens his life by the space of a single moment. The exigencies of any age may demand the sacrifice of men, and it seems to be ordained that the world's life and progress shall be sustained at the expense of individual wear. But outside and beyond all this, as physicians well know through the testimony of professional experience, large numbers, by honest, earnest and indiscreet exertions, are making themselves irrevocably bankrupt in health and recuperative power, and are hastening dissolution by means less gross and repulsive, but not less effectual than the Japanese section of the abdomen. They die prematurely in the name of some reputable disease which excites no suspicion, and does not suggest to the world the idea of self-destruction. In common phrase, they pay the debt of nature; but it is nature provoked and thwarted by human folly or human misfortune.

Following this train of thought a little further, it is obvious that whatever is suicidal in its effects upon one generation, is, by the law of hereditary descent, homicidal for those who follow. The degeneration and extinction of families, once strong in vigor and numbers, are well attested facts. But offspring derives its character through as well as from parents. Witness the occurrences which are catalogued as instances of atavism. Congenital condition, which really is so important a part of one's stock in life and health, is not simple, but extremely complex in the elements of its composition; and, in its production, looks back to manifold influences, which, appearing at various ancestral points, move, with inevitable and innumerable modifications, along converging lines of transmission, and by their final union in each individual combine to form what we designate by the comprehensive term constitution.

There are competent persons who hold the opinion that, with all due allowance for numerical growth of population, there is an increase of insanity and of other disorders of the nervous system. This greater prevalence of these affections may, I think, be traced to the circumstances under which procreation takes place, and may be adduced as an instructive example of the influence which modes of parental life exert upon offspring. Active brains do not necessarily render an age thoroughly and truly intellectual, but they surely make it a busy one. In our own day, the wider and still expanding scope of general information, the elevated standard of education and the methods of attaining to it, the sub-division and multiplication of details in all scientific studies, the anxieties and competitions of business, the ambitions of political life, all tend to beget a permanent state of mental tension and nervous excitement, such as formerly were only known in times which seriously disturbed the public tranquillity. Out of this condition of over-exertion and partial exhaustion children are born, with antecedents and prospects which no thinking man would select as favorable to the stability and durability of the nervous system. If daughters are often disparaged by the comparison which is made between their infirmities and the overwhelming energy of their mothers, it may be that the former are only bearing a burden of debt increased by an extravagant expenditure of force on the maternal part.

The question of the definite, specific causation of disease has long attracted an earnest attention from both scientific and popular sources. By the extent of its discussions, every text-book confesses the interest attaching to the subject, and rarely a patient who fails to demand the reason of his illness. Curiosity constantly propounds a problem for which philosophy is unable to furnish an exact, complete and satisfactory solution.

In answer to a question which inexperience only would ask, the late Dr. James Jackson replied, "I should be glad to know all the causes of disease, but during a long and diligent life I have looked for them in vain." We may acquire some positive information concerning the immediate associations and connections of disease, but many of its causes stand in such intimate relation with the habitual and exceptional acts of daily life in more than a single generation, that these causes escape detection by all available means of analysis. The thoughtless deed of some remote progenitor may participate in the origination of the malady which terminates fatally to-day.

The customs of society, often found in effective opposition to the interests of good health, are but the aggregate of the habits of its members. And if these customs sometimes engender disease, the sufferer is only exposed to the reversion of his own improprieties, and is forced to accept consequences in the responsibility for which he has his just share.

The common notions of disease convey to the mind the idea of what endangers or destroys life. But as this impression is not capable of universal application, I wish to invert my subject, and making disease the first term in the series, recall a few facts which show that it may sometimes perform a salutary and protective office. And, in this connection, two or three brief suggestions will suffice. Certain contagious diseases, almost universal in their visitations, capable of running a thorough and complete course, without apparent detriment, afford a protection which is absolute for the majority of those whom they attack. Oftentimes, a safe disease may anticipate and prevent one that is probably or surely destructive of life. This conservative morbid process may be of artificial origin, as from the introduction of vaccine virus, or may arise spontaneously, as in those cases where an adhesive inflammation of limited extent saves one from a general and dangerous peritonitis.

With obvious limitations, disease comes as a benefaction to those who, with some mistaken ideas of necessity or propriety, defy natural law and ignore the relations which have been established between the intensity and duration of effort and the subsequent repose which the expressions of that law require. An illness of a severity just sufficient to produce complete disability and to secure unreserved surrender to the condition and course of disease, may, by the state of inaction and rest thus imposed, bring a long-needed adjustment to any man who has assumed, or had thrust upon him, burdens in excess of his strength. There is a popular impression, vaguely conceived but with some small foundation, that disease may be wholesome and conducive to health; and many a patient has found himself, at the completion of his convalescence, not simply restored to the point at which the disease made its invasion, but literally refreshed and renewed.

No elaborate machine is complete unless it is provided with some self-acting apparatus which shall take cognizance of anything which threatens the perfection of its product, or the safety of some of its parts. Many people are not superior to inanimate objects in the intelligence and discretion which they exhibit with reference to the care of themselves. For them, it is a piece of enviable good fortune when disease comes to their rescue, as a regulating and restraining agent, like the automatic contrivance in mechanics, and saves them from transgressions of which the results may be without remedy. Such good fortune is the portion of but few; for the average human system is rich in self-protective power, and the determination with which it instinctively seeks to maintain its integrity to the last is strikingly shown in two instances. The appearance of unusual health which frequently precedes a seizure, seems to be the final effort which the system makes, under the stimulus of some premonition, to resist the approach of disease. In close analogy with this, is the improvement often noticed in symptoms just before death; a delusive change, which is simply the evidence of one last attempt to rally before yielding in a hopeless struggle.

A CASE OF POISONING BY FIVE GRAINS OF STRYCHNINE TREATED BY CHLOROFORM INHALATIONS. RECOVERY.

By G. W. Copeland, M.D.

As the following case may be of some interest, I will submit it to the profession.

Mr. B., shop-keeper, a middle-aged man of temperate habits, while suffering from depression of spirits, obtained, on Sept. 1st, ten grains of strychnine, representing his intentions were to poison a dog. He secured a room at a hotel, took a dose of laudanum as a preparatory step, and went to bed, intending to swallow the drug as soon as the effects of the opiate were apparent. It appears he fell asleep, and did not awake till half past four in the morning, when he took half the quantity previously mentioned. Some time after, he was seized with convulsions. The occupants of the adjoining rooms, awakened and alarmed by his screams, at length came to his relief. I was called and saw him at 6, A.M. I found him lying in bed; legs and arms extended, his hands firmly clenching the sides of the mattress; intellect clear. He confessed he had taken strychnine. The clothing, by his request, had all been removed, as the slightest touch produced a spasm. I administered twenty grains of sulphate of zinc as soon as it could be obtained. This he swallowed with great difficulty, the contact of the solution with his mouth producing trismus and constriction of the throat. The paroxysms came on every three or four minutes. He was conscious of their approach, and entreated us to hold him, to raise him up, or lift him out of bed, till his body became fixed, his head drawn back and articulation impossible. In this condition of complete opisthotonos, he remained for about a minute, his face livid, and death apparently inevitable. I now resorted to chloroform inhalations, with the happy result of preventing each paroxysm from lasting over a few seconds, or subduing it before the muscles of the back became rigid. So soon as he felt one coming on, I applied the vapor to his mouth;

when the muscles were completely relaxed and the breathing natural, I removed it. The convulsions returned regularly till 2, P.M.; the intervals then grew longer till 5, when the paroxysms entirely subsided. For some time after he regained the use of his hands and arms, the legs could not be touched without producing a shock, as if the poles of a battery had been applied. In the eleven hours, he had used over a pound of chloroform. During the night and next day, I found it necessary to relieve the bladder with the catheter. The following evening—thirty-six hours after I first saw him—he was taken home in his carriage, and a week subsequently he walked to my office, although still suffering from soreness and stiffness of the muscles.

In this case, the sulphate of zinc did not produce emesis, nor did I repeat the dose, feeling confident the drug must already have been absorbed. And here I would state that the treatment given in all the books, viz., "give emetics, and persist in their use till free emesis is produced," should at least be modified. If we do not see the patient till a quarter of an hour after the poison is taken, or if convulsions have set in, emesis will surely do much harm. In a case I saw in Philadelphia in 1868, the patient was nauseated with doses of sulphate of zinc and ipecac. Each attempt at emesis produced the most alarming convulsions. With chloroform to ward off the convulsions till the poison is eliminated from the system, deaths from strychnine will be very rare.

50 *Maverick Square, Boston.*

Oxide of Zinc as a Remedy for the Diarrhœa of Infancy and Childhood.—Dr. Brakenridge has carefully tried various methods of treatment in many hundreds of cases of diarrhœa of infancy and childhood, at the dispensary of the Edinburgh Royal Hospital for sick children. The above remedy he has been led to adopt for the following reasons: First, the disease depends chiefly upon a weak and too impressionable state of the nerve centres presiding over alimentary secretion; secondly, it is correlated to convulsions and other spasmodic diseases; thirdly, it is accompanied by hyperæmia of the secreting surfaces of the alimentary canal. To meet these indications, we must have a remedy which is, firstly, tonic; secondly, anti-spasmodic; thirdly, astringent. In the oxide of zinc we have these three properties combined. First: as a tonic, it has been said to be to the nervous system what iron is to the blood. Its usefulness in the analogous condition of profuse sweating is well known. Secondly: as an anti-spasmodic, it is deservedly held in high estimation, and has been found to effect, frequently, a cure in convulsions and other spasmodic diseases. It may, therefore, be depended upon to prevent the occurrence of those nervous diseases which stand correlated to diarrhœa, as the alternative results of such irritations as dentition, worms, &c., and which may supervene on the rude stoppage of diarrhœa by astringents. Thirdly: its astringent properties are well known.—*Medical Times and Gazette.*

Progress in Medicine.

REPORT ON OPHTHALMOLOGY.

By O. F. WADSWORH, M.D. Harv.

ANATOMY.

1. UEBER die Nerven der Hornhaut. HOYER. Archiv f. mikros. Anatomie. Bd. ix. Hft. 2.

2. Sulla terminazione dei nervi nella cornea. DURANTE. Abstr. in Centralbl. f. d. med. Wissensch., No. 27, 1873.

3. Ueber Mehrschichtige Epithelien. LAUGERHANS. Virchow's Archiv, Bd. lviii. Hft. 1.

4. Untersuchungen ueber die Drusen der Bindehaut des Auges. WOLFRING. Centralbl. f. d. med. Wissensch., No. 54, 1872.

5. Zur Frage ueber die Iris Musculatur. GRUENHAGEN. Archiv f. mikros. Anatomie, Bd. ix. Hft. 2.

6. Die Musculatur der menschlichen Iris. MERKEL. Gratulationsschrift. 1873.

1. Hoyer describes, separately, the distribution and termination of the nerves of the cornea in the four classes of vertebrates, and adds a valuable critical review of the literature of the subject. Like other recent observers, he found chloride of gold the most valuable reagent for his purpose. There is only space in this report for a brief account of the corneal nerves in man. Branches of the ciliary nerves enter the sclera near the corneal edge, and form within it a meshwork which surrounds the cornea. From this meshwork, some sixty separate nerve bundles, each containing from one to twelve or more medullary fibres, enter the cornea, the larger bundles nearer its posterior, the smaller nearer its anterior surface. Soon losing their medullary sheaths, the nerves form numerous plexuses in the corneal substance, and, finally, a meshwork with small interstices in the most anterior layers, some meshes immediately beneath Bowman's membrane, others somewhat deeper, some consisting of finer, others of coarser fibres. The splitting up of the axis cylinders into minute fibres and the manner of formation of plexuses are carefully detailed. Nowhere, Hoyer considers, do true anastomoses occur. The nuclei which are present in some of the larger branches and at the intersection or division, are not ganglion-cells, but belong to the neuroglia. From the superficial network above described, numerous small branches penetrate Bowman's membrane, and spread out, tassel-like, to form a close network of fine fibrils on the surface of the membrane, in immediate contact with the lowest epithelial cells (sub-epithelial layer). Toward the centre of the cornea, this meshwork is closer, closest a little to the nasal side. In Bowman's membrane, no nerves exist, except the perforating branches. Between the epithelial cells, and especially between the flattened cells of the superficial layers, the *sub-epithelial* meshwork is continued and numerous free terminations of the fibres occur, particularly among the flattened cells, and appear to reach to their free surface. Similar free ending of the nerve fibrils is described in the substance of the cornea; tolerably frequent in the anterior

layers, seldom in the middle, and in the posterior only exceptionally present. The greater portion of these fibres which end free, Hoyer regards as belonging to a characteristic meshwork lying just beneath Bowman's membrane, the fibres of which contain no nuclei, and which is closest nearest the periphery, more scanty toward the centre of the cornea. Connection of the nerve fibres with the corneal corpuscles (see JOURNAL, Nov. 7, 1872), or terminal enlargements at the free epithelial surface (Cohnheim), Hoyer was unable to discover.

2. Durante describes, in the frog's cornea, besides the nerve plexus in the deeper layers, an exceedingly fine meshwork in the anterior layers, its meshes regularly rectangular, which he regards as due to a true anastomosis of primitive nerve fibres. The fibres which perforate the anterior layer of the cornea to reach the epithelium, he states, pass directly through the lower cylindrical layer of cells, and wind through the other layers to the layer next to the outer, where they form a meshwork of fibrils, with irregular and narrow meshes. In the rabbit and dog, the same terminal network exists, with slight modifications. Durante has never observed ganglion-cells within the peripheral portion of the corneal nerves; the not infrequent nuclei he, as Hoyer, believes are of connective tissue.

3. Laugerhans finds that the apparently homogeneous border at the base of the innermost layer of cells of the cornea is caused, as Henle has stated, by the interlocking of fine serrations at the base of the cells, with similar projections from the corneal tissue. Similar serrations occur on the upper surface of this layer, and on both upper and under surfaces of the other layers, excepting the upper surface of the outer layer. The serrations are of various degrees of fineness in different animals, in man very fine. The cells of the different layers take on a great variety of shapes from their mutual pressure, the lower surfaces in general being concave and receiving the summits of the cells of the layers beneath; the upper, convex. Often from the lower edges of the cells, digitations press downward between the lower cells, and especially is this the case with the second layer, the digitation of its cells often reaching to the cornea itself. In the conjunctiva of the lids, the appearance of the cells is quite similar, but the connection of the lowest layer with the connective tissue below is less close.

4. Wolfring has discovered, in the upper part of the tarsus of the upper lid, toward the nasal side, a number of acinose glands. These glands lie not only in the triangular space between the blind ends of the Meibomian glands and the orbital edge of the tarsus, but also occasionally are present between the lobes of the latter. They open by common ducts at or near the orbital edge of the tarsus, and resemble the glands of Krause in the conjunctival fold in everything except their situation, while in the deeper inflammations of the tarsal conjunctiva they undergo the same pathological changes as Krause's glands.

The glands described by Wolfring correspond in position to glands which Klein had previously given an account of in Stricker's handbook. Klein, however, regarded them as tubular, not acinose.

5. Gruenhagen has, in previously published papers, taken decided ground against the existence of a dilatator muscle of the iris. The present paper consists mainly of a criticism of the views of those observers who have described such a muscle, and it does not appear that he has pursued any fresh investigations to support his side of the ar-

gument. Strangely enough, he seems to place considerable weight on the assumed fact that, on physiological grounds, there is no need of a dilatator, while other writers, even though admitting the insufficience of anatomical proof of its presence, have argued that, unless such a muscle does exist, it is at least extremely difficult to offer a satisfactory explanation of some movements of the iris. He points out the differences which exist in the various descriptions which have been given of this muscle, and divides its supporters into two classes: those who believe it to consist of bundles of fibres curving from the sphincter to take a radial course, and those who regard the layer first described by Bruch, lying between the stroma of the iris and its posterior epithelium, as muscular. The radial bundles of fibres curving from the sphincter he admits, but not that they extend so far toward the periphery as some have stated; they act, he believes, in assisting the contractions of the sphincter, as drawing on the crossed ends of a necktie makes it tighter. Bruch's layer he asserts to consist of elastic tissue. He admits that, in some birds, beneath the posterior pigment layer of the iris, there exists a layer of spindle-formed cells, on the side of which an elliptical nucleus is situated, and which often taper to fine processes at the two ends; these, however, he regards as a second layer of epithelium.

6. Merkel, as the result of recent investigations, describes a continuous layer of muscular fibres situated immediately behind the stroma of the iris, and having a direction radiating from the pupil. The thickness of the layer was only from one and a half to two times that of the thickest portion of an individual fibre. Near the pupil, the more anterior fibres curve round to join the sphincter; the more posterior end without changing their course. The muscle does not quite reach to the ciliary insertion of the iris, but near the ciliary body its fibres curve so that they here form a circular layer. In the greater portion of the layer, the fibres follow a straight course. These statements agree very nearly with the results obtained by Jeropheef, given in brief in Stricker's Handbook. Both nuclei and fibres were rendered readily distinguishable by staining with hæmatoxylin.

PHYSIOLOGY.

1. Der Uebergang einiger Substanzen aus dem Conjunctivalsack in das Wasser der vorderen Augenkammer. LILIENFELD. Monatsbl. f. Augenheilk. Beilageheft, 1873.

2. Zur Identitäts Frage. SCHOELER. Archiv f. Ophthalmologie, Bd. xix. Abth. 1.

3. Stereoskopie bei unvollkommenen Sehvermögen. VAN DER MEULEN. Archiv f. Ophthalmologie, Bd. xix. Abth. 1.

4. Ueber die Accommodationsbewegung der Chorioidea im Auge des Menschen, des Affen und der Katze. HENSEN und VOELCKERS. Archiv f. Ophthalmologie, Bd. xix. Abth. 1.

5. Ueber Scheinbare Accommodation bei Aphakie. DONDERS. Archiv f. Ophthalmologie, Bd. xix. Abth. 1.

6. Accommodations-Vermögen bei Aphakie. MANNHARDT. Inaugural-Dissertation. Kiel, 1873.

7. Die Stokes'sche Linse mit constanter Axe. SNELLEN. Archiv f. Ophthalmologie, Bd. xix. Hft. 1.

8. Eine Methode zur Bestimmung der Refractions-Anomalien. PUROES. Archiv f. Ophthalmologie, Bd. xix. Abth. 1.

1. Lilienfeld undertook a series of experiments to determine whether substances dropped into the conjunctival sac generally pass into the intra-ocular fluids. Most of the substances employed were found to be present in the aqueous humor; with few exceptions, these were such as excited more or less inflammation of conjunctiva, cornea and iris, and this fact Lilienfeld believes is of importance as favoring the passage of materials from the conjunctiva into the aqueous. He thinks endosmosis through the cornea is at least not the only way of explaining the matter; but that it is equally possible that substances may be absorbed into the largest vessels of the conjunctiva, pass through the anterior ciliary arteries into the vessels of the iris and ciliary body, and thence be excreted with the aqueous into the anterior chamber.

2. Schoeler's paper is of decided scientific value. In the limits of this report, however, it can only be stated that his investigations, among other results, appear to overthrow entirely the theory of identity of corresponding points of the retinas, and to show that the mechanism of associated movements of the eyes, as well as of those attending accommodation, is not, in the new-born, pre-established.

3. Van der Meulen deduces, from experiments made in Donders's laboratory, the fact of practical importance that, if one eye be normal, vision of even $\frac{1}{50}$ in the other eye may be of considerable assistance in determining the distance of large objects.

4. Hensen and Völckers, in a monograph on the mechanism of the accommodation, published in 1868, stated that they had been able to demonstrate, in the eye of the dog, a movement of the choroid forward when accommodation for the near occurred. The eye having been laid bare, and needles passed through the equatorial portion of the sclera and choroid, the ciliary nerves were irritated, and, as the pupil contracted and the lens became more convex, the free external ends of the needles underwent a decided movement backward. By making an opening in the sclera, they were able also to see the choroid advance. The theory that a similar movement took place in the human eye has never, however, obtained any general acceptance. Others had, indeed, confirmed their observations on the dog, but Adamük, experimenting on cats, found but little movement of the choroid, and argued from this and anatomical consideration of human eyes, that such a movement could only take place in eyes in which the ciliary muscle contained no circular fibres, and in which the outer attachment of the zonula of Zinn is situated more posteriorly. The same observers now give the result of investigations on the eyes of man, the ape and the cat. The two latter were curarized, the eyes laid bare, and needles inserted through the sclera. The results of electrical stimulus showed, as in former experiments on the dog, evident movement of the choroid. The difficulty of obtaining freshly enucleated human eyes in which the choroid and ciliary muscle might be supposed relatively normal, limited the number of their experiments in this direction to four. Three of these eyes gave negative, or nearly negative results; all of them, however, were under the influence of atropine, and in all subsequent dissection showed a high degree of degeneration of the ciliary muscle. The fourth eye, the ciliary muscle and choroid of which were in good condition, gave results which corresponded entirely with those obtained on other animals. Needles, inserted in the equatorial region, showed exact and evident movement of their free extremities backward; a needle insert-

ed in the ciliary body did not move, and one inserted close to the macula lutea, as had also been the case with the ape, remained stationary. The experiments appear to be convincing, and their importance, as explaining the mechanism of the changes which take place in myopia, is not inconsiderable.

5. Donders takes up again the question of accommodation in aphakial eyes, which, previously regarded as positively settled, was reopened by Förster, in the *Monatsbl. f. Augenheilk.*, Feb. and March, 1872 (see JOURNAL, Nov. 7, 1872). He points out the numerous inaccuracies and fallacies in Förster's argument, and shows, by the results of a series of crucial experiments carried out by one of his pupils, the details of several of which are given, that absolutely no accommodation occurs in aphakia. With regard to the supposition of Woinow, from observations on aphakial eyes, that the cause of astigmatism, as well as variations in its degree, &c., may depend on the form of the sclera, the impossibility of such a connection of cause and effect and the ease with which an error of observation might be made are referred to. Much the same supposition as that of Woinow was brought forward at the meeting of the American Ophthalmological Society, in 1872, and was then well answered by Dr. Hay.

6. Mannhardt, from independent observations, comes to the same conclusions as Donders.

7. Stokes combined a positive and negative cylinder glass so as to produce at will a cylindrical glass of varying focus. One great objection to the use of this glass in practice was the fact that the direction of the cylindrical axes changed with every change in the strength. Snellen describes a modification of the lens, by which the important advantage is gained that the axes are maintained constant. Still, the disadvantage exists that, in the determination of astigmatism by its means, the refraction of only one meridian can be determined at a time. The employment of two positive cylinders, instead of a positive and a negative, removes one element of difficulty, but introduces another, since with the latter combination a certain varying spherical effect is obtained as the cylindrical effect varies. Snellen proposes to obviate the latter difficulty by combining with the Stokes lens two spherical glasses (a positive and a negative), arranged on the principle of the Gallilean telescope, and, by changing the distance between them as the cylindrical lenses are rotated, to neutralize the spherical refraction. The technical difficulties in the way, he believes can be satisfactorily overcome. On the same principle, that of the Gallilean telescope, he proposes to construct double spectacles, with which different degrees of spherical ametropia may be determined.

8. Puroes describes the method he has employed for testing degrees of ametropia with the modified Stokes's lens. From the account given, it would appear to be much less convenient than the methods usually employed for this purpose, even if it be as accurate.

[To be concluded.]

IN the Introductory Address at Queen's College, Birmingham, on "Public Health," Mr. Clay, the orator, stated that the Court Rolls of Stratford-on-Avon showed that Shakspeare's father had been fined, in 1552, for depositing filth in the public street, and again, six years later, for not keeping his gutter clean.

Bibliographical Notices.

Clinical Reports from Private Practice. By JOHN HERBERT CLAIBORNE, A.M., M.D., one of the Vice Presidents of the Medical Society of Virginia; lately Surgeon in the Provisional Army of the Confederate States; and Executive Officer in charge of General Military Hospitals at Petersburg, Virginia. Petersburg, Va.: Jos. Van Holt Nash, Publisher. 1873. 8vo. Pp. 424.

THIS book is a collection of cases occurring in the private practice of a physician during a period of twenty years, with commentaries on certain subjects suggested by them. The cases are briefly but clearly reported, and chiefly intended to illustrate the subjects of the treatment of the diseases most frequently coming under the cognizance of the general practitioner, surgical cases being excluded. The author states that his patients are mostly composed of well-to-do people, who have lived under good hygienic conditions, and who were generally free from depressing influences. Such people, he says, bear mercury, depletion, and the antiphlogistic regimen better than that class whose cases ordinarily make up the reports of hospitals, infirmaries, college clinics and other public charities. We accordingly find a more active treatment recommended in certain cases than is customary in this latitude; and especially we have noticed that calomel is prescribed to nearly every patient in some stage of his disease; but, with this exception, we do not see that Dr. Claiborne's treatment differs materially from that which intelligent practitioners in all parts of the civilized world have adopted as the best. We have been much pleased with the perusal of the volume, and can conscientiously recommend it as worthy of the attention of the profession, and especially useful to those who have much occasion to treat malarial diseases. We can only briefly allude to a few of the subjects discussed by Dr. Claiborne, and to his opinions upon them.

In the treatment of *Dysmenorrhœa,* the author places more reliance on constitutional treatment, and on internal remedies, than on incision of the cervix uteri, believing that the latter proceeding, though sometimes demanded by a constricted condition of the canal, or internal os, is, in the majority of cases, useless. He protests against that indiscriminate use of the knife which is enjoined by some eminent gynæcologists. "In every case of dysmenorrhœa which presents itself, and especially in the case of every unmarried woman, a rational medical treatment should be tried before resorting to the use of instruments." In the neuralgic form of the disease, he advises quinine, cold baths, &c., to build up the general health, and, during the paroxysm, opiates, hot fomentations, aconite and anodyne suppositories. In active congestive dysmenorrhœa, he recommends the bichloride of mercury, in small doses, in the intervals, and, during the paroxysm, general or local depletion, hot baths, Dover's powder, camphor, &c. In the passive form, he employs iodide of iron; in rheumatic dysmenorrhœa, purging with colchicum and magnesia before the paroxysm, and Dover's powder when the pain comes on. He speaks of cypripedin as an empirical remedy of some value in this disease. In all cases, he considers it very important to maintain a healthy action of the "cutaneous glands," and recommends a judicious system of baths, with flannel worn next the skin, summer and winter.

The author's remarks concerning the treatment of *Rheumatism* are interesting, in view of the great diversity of opinion on that subject. He is not by any means disposed to leave his patients to Nature alone ; at the same time he is moderate in the administration of medicine. "Mercurials in the commencement of the disease," he says, "colchicum and alkalis, especially the phosphate of ammonia, when the symptoms become sub-acute, the iodide of potash when the patient is pale, feeble and spiritless, constitute the routine of treatment with me." Mercury is used "to correct the intestinal secretions," not for the sake of its constitutional effect. Opiates he gives only to the extent of alleviating pain and procuring rest for the patient. Quinine is required in cases complicated with malarial poison.

The subject of the treatment of *Pneumonia* is fully discussed, but without any satisfactory results. Dr. Claiborne justly observes that "climatic changes, endemic influences, constitutional peculiarities, age, season, prior or repeated attacks, present condition of patient, all combine to influence the treatment, and especially to render a description of general treatment difficult and unsatisfactory." He does not seem to be aware that the great majority of cases of uncomplicated pneumonia will recover quickly and perfectly without any treatment whatever.

Under the term *Cholera Infantum*, Dr. Claiborne includes all cases of diarrhœa in children during the period of the first dentition, as well as those characterized by frequent, profuse, serous discharges, with vomiting and collapse. It is not surprising, therefore, that he does not consider the disease as peculiarly frequent in this country. We think, on the contrary, there can be no doubt that the genuine disease is comparatively rare in Europe. He still adheres to the old notion that the liver is always affected in this disease, with the result of first "perverting, then suppressing the normal secretion." In the treatment, calomel is with him "the main reliance and the rarely-failing resource." One-fourth of a grain is given every hour, in finely-powdered ice, until the vomiting and purging are checked, or the passages assume a thick, greenish character. Brandy is also given if there be much prostration ; counter-irritation is applied to the stomach, and breast milk, if practicable, if not, milk and water, in teaspoonful doses, ice-cold, every half-hour, or oftener. Opiates or astringents are subsequently given, according to circumstances. We commend the author's remarks on the use of opium in the treatment of children. to every young practitioner ; he points out very clearly the danger of the incautious use of this drug. The whole article on the treatment of this dangerous disease is extremely interesting, and may be read with profit by every physician who has the charge of young children.

Diphtheria is the subject of a highly instructive chapter, in which the author treats of its contagion, its diagnosis, its treatment, and the question of its identity, or the reverse, with croup. He believes in the duality of the two diseases, founding his opinion on the supposed "sthenic" character of croup, and the toxicohæmic character of diphtheria. "Croup commences in the larynx, and, though it may extend downwards, never extends upwards. Diphtheria commences in the fauces, and though it may extend downwards, yet it very often extends upwards. The first symptoms of the latter occur in the parts subservient to deglutition, the first symptoms of the former in the respiratory tract. One is always idiopathic, the other secondary; one is affected by temperature and season, and is never epidemic or infectious; the other is capable of widespread epidemic influence at any season, and is sometimes infectious. Both are diseases peculiar to childhood; but diphtheria is often seen in the adult, croup rarely. In the latter disease, no unpleasant sequelæ ever follow recovery—such as paralysis, loss of vision, &c. In the former, such sequelæ often ensue. In one, the antiphlogistic treatment is generally indicated; in the other, it is productive of harm, unless used with great discretion. In the one, the prognosis is generally favorable, except in certain epidemics; in the other, it is exceedingly grave. The duration of one is rarely beyond ten days; the other often continues twenty. Convalescence from the one, prompt and speedy; from the other, tedious and uncertain." (Nothing is said about albuminuria.)

It may be remarked that these distinctive indications *prove* nothing. The two diseases may be really different, but the fact that an exudative affection of the throat is in one case followed, for instance, by paralysis, and in another not, does not prove it. We have seen a case in which well-marked diphtheritic paralysis of the limbs followed what was called by an eminent physician membranous croup. To say that true croup is never followed by paralysis is begging the question; we must first settle what true croup is, and then see if it be ever followed by paralysis.

Dr. Claiborne's remarks on the subject of the treatment of diphtheria are extremely sensible. He believes *that it has often been treated too much.* We are glad that he repudiates all caustic local applications, as only adding to the sufferings of the patient, without being of any benefit. He relies on a tonic, sustaining and stimulating treatment, with simple astringent or antiseptic gargles under certain circumstances. In one case, that of a girl, 11 years old, in which suffocation was imminent, he performed tracheotomy. The immediate effect of the operation was complete relief; but in less than twenty-four hours capillary bronchitis set in, and the patient died.

Under the title of *Periodic Fever*, the author discusses an affection frequently confounded with typhoid fever, which it resembles in some of its features, but which is a wholly distinct disease, of malarial origin, and curable by quinine. It is distinguished from intermittent fever by the mildness and irregularity of its paroxysms; and from the ordinary bilious remittent by the absence of severe constitutional symptoms attendant on its inception, and of any special bilious disorder. The disease is rarely fatal. Its duration, under appropriate treatment, is about six days, but it may last much longer if mistaken for typhoid and treated accordingly. Dr. Claiborne gives a dose of calomel and Dover's powder in the beginning; leeches either to the head or on the bowels, followed by fifteen or twenty grains of quinine.

An article on *Delirium Tremens* contains judicious remarks on treatment, to which we must refer the reader, merely remarking that the author is no advocate for the gradual withdrawal of stimulants, but withholds them completely from the first. Nor does he believe the attack is ever brought on by a sudden abstraction of the accustomed stimulus. He recommends opium, but in moderate doses, and never with the view of promoting sleep, warning the practitioner against the danger of large doses of the drug in this disease.

We have by no means exhausted the topics which are discussed by Dr. Claiborne; for much which we have left unnoticed we refer the reader to the book itself, with the assurance that he will find it both agreeable and instructive, although we by no means agree with the author in all his views. We notice some faults in style and also in taste, but these do not materially interfere with the value of the book.

Treatise on Diseases of the Ear. By D. B. St. John Roosa, M.D. New York: William Wood & Co. 1873.

This handsome volume, of 525 pages, furnishes the American student with a complete text-book on diseases of the ear. The arrangement of subject matter and the double index of subjects and authors gives it the further advantage of a book for ready reference.

Following a concise preface, in which the author sets forth the object and scope of his work, "endeavoring to give not only a comprehensive digest of the most recent European researches, but also to present with entire impartiality the views and experiences of American practitioners and writers, so far as the plan of a practical treatise would allow," there is a table of contents and a list of 101 wood-cuts. The body of the work opens with an introduction of 32 pages, consisting of an interesting sketch of the progress of otology, giving the resumé of the investigations in the anatomy of the ear up to 1858, and in aural therapeutics from the time of Asclepiades to the present date; the latter resumé affords ample food for the curious, in matters of therapeutics. The second chapter gives the anatomy of the external ear, illustrated by copies from the excellent plates of Henle. Of these and engraved copies of the photographs of Rüdinger, the author has advisedly availed himself in the illustration of the anatomical portion of his work. The third chapter, of 32 pages, is devoted to the examination of aural patients, including the means for testing and recording the hearing power, the use of the speculum, mirror, the air-douche and Eustachian catheter and rhinoscopic examination. The fourth chapter treats of the functions and diseases of the auricle; and the fifth and sixth chapters, which conclude the first part of the work, comprise, in a space of sixty pages, much matter of interest to the general practitioner in the description and treatment of diffuse and circumscribed inflammation of the auditory canal, the peculiar affection lately observed as resulting from vegetable fungous growths, the diagnosis and removal of inspissated cerumen, of foreign bodies and of polypi.

The second part of the work comprises 278 pages, of which 40 pages are devoted to the anatomy of the middle ear, giving in addition to quotations and plates from Henle and Gruber, the later observations of Kessel and of Rüdinger in regard to the anatomy and functions of the Eustachian tube.

Chapter X. treats of injuries of the membrana tympani, and the four succeeding chapters cover ground which is represented by from thirty to thirty-five per cent. of all cases occurring in aural practice in the form of acute and chronic non-suppurative inflammation of the middle ear; and this portion of the work is of particular value to the specialist as it is made to include the later contributions to the therapeutics of these affections, a subject which has received considerable attention during the past few years, especially from German observers. Acute and chronic suppurative inflammations of the middle ear occupy the next two chapters, following which a space of 72 pages, devoted to the consequences of the diseases, concludes part second, including the nature and treatment of aural polypi and a valuable treatise upon mastoid diseases, caries and necrosis, and a tabulated statement of forty cases, showing the course and symptoms of meningitis, cerebral abscess and pyæmia resulting from aural disease.

Part third comprises the anatomy of the internal ear, covering twenty-three pages. The diseases of the internal ear are tabulated according to their proximate and remote causes and then treated of seriatim, a method of presenting the subject which has practical advantages. In addition to wood-cuts in the text, is a colored lithographic plate of illustrative cases of disease of the membrana tympani and middle ear from drawings made by Dr. H. P. Quincy, including a normal membrana tympani and seven cases of suppurative and non-suppurative inflammation.

The work, as a whole, is a comprehensive summary of the present knowledge of the anatomy of the ear and of the diseases and their treatment. The anatomical portion of the treatise is so distributed as to make it most readily available to the practitioner who desires a work for reference, and while concise is still sufficiently full for the instruction of the general student. The description of the diseases and their treatment is the result of the author's own observation, and, together with comparative quotations from other writers, gives the latest results of the investigations in this branch of surgery.

The work supplies a need for a good text-book, which has heretofore been met to the English speaking student by the author's translation of Von Troltsch, published nine years ago. C. J. B.

BOOKS AND PAMPHLETS RECEIVED.

Report of the Diseases of Indiana for the year 1872. By George Sutton, M.D., of Aurora, Indiana. (From Proceedings of the State Medical Society.) Indianapolis, 1873. Pp. 33.

Nitrite of Amyl in the Treatment of Spasmodic Asthma and Acute Bronchitis. By Daniel H. Kitchen, M.D. Re-printed from American Journal of Insanity. 1873. Pp. 8.

A Manual of Midwifery, including the Pathology of Pregnancy and the Puerperal State. By Dr. Karl Schrœder. Translated into English from the Third German Edition by Charles H. Carter, B.A., M.D., B.S. London. New York: D. Appleton & Co. 1873. (From A. Williams & Co.)

Twenty-second Annual Report of the Boston Provident Association. October, 1873. Pp. 23.

A Treatise on the Diseases of the Eye. By J. Sœlberg Wells, F.R.C.S. Second American from the third English Edition, with additions. Philadelphia: Henry C. Lea. 1873. Pp. 836.

Boston Medical and Surgical Journal.

Boston: Thursday, November 6, 1873.

The Death of Sir Henry Holland, lately announced, has removed another of the more prominent medical men of our time. He might, however, with more propriety, be considered to belong to an earlier generation of men than those who now occupy the leading positions in his own and other countries of Europe, his great age carrying him back to times which are with most a matter of history only. He was born Oct. 27, 1788, and took his medical degree at Edinburgh in 1811. He did not, however, begin the practice of his profession until 1816, the interval being passed in travel, during a part of which time he attended the Princess of Wales in a tour on the Continent. His professional career, owing partly to his social advantages and literary tastes, presented a marked difference from that of most medical men. From the very beginning, his practice was confined to the upper classes in society, and those who have read his "Recollections of Past Life," are familiar with the innumerable distinguished men and women with whom he was brought in contact. Indeed, it is to this peculiarity chiefly that his life is so full of interest. It is, in fact, a part of the history of the time. After nearly forty years of professional service, he was appointed Physician in ordinary to the Queen, and in the following year was created Baronet. His practice extended over a period of fifty years. Although a man of great literary tastes, he may be said to have contributed but little to medical literature; his Medical Notes and Reflections, which ran through several editions, being his sole work of this character. This may be explained by the fact that at no time during his career was he connected with any hospital. He wrote frequently for the Edinburgh and Quarterly reviews, and his accounts of travel have been numerous and interesting. Although an active practitioner for half a century, he found time, taken from his professional pursuits, to travel over a greater part of the globe, and to this activity may be ascribed a long life of health and usefulness. He proved to the profession that a healthful recreation is not incompatible with professional success, a fact which few men, in this country particularly, appear to realize. With him may be said to have passed away one of the last vestiges of the old school of men who ornamented London in the early part of this century.

We are much gratified at learning of the success attendant on the Harvard Dental School. It has, in its new class, three young men from

Europe: one from England, one from Holland and one from Germany. We have long known of the fame of American dentists in Europe, but this is, we believe, the first evidence that we have received that *Europe is coming to America to study* at our venerable University. It has reason to do so, for our methods of practising dentistry are vastly superior to the European, and the Harvard School has taken a high stand in regard to the length of time of study and of practical work it will require of its pupils before bestowing its degrees. In doing so, it has only pursued the same course followed in the Medical School, and it has put itself in full communion with other departments of the University, as carried on by its present enlightened government. We trust that this is only the beginning of a most honorable career for the Dental School. It has our heartiest good wishes for full success.

We are indebted to a correspondent for the following statement of the attention given in Italy to the treatment and study of disease of the skin and of syphilis. Boston would do well to take example.

The universities of Florence [pop. 120,000] and of Rome [pop. 210,000] possess special professors and clinics for diseases of the skin and for syphilis. Bologna [pop. 90,000], Naples [pop. 500,000], Palermo [pop. 170,000], Turin [pop. 185,000] and others have each a professor and a clinic for these two departments combined. Even such places as Pavia, Padua, Genoa and Messina recognize these specialties, though compelled to unite them with one of the general clinics. Medical students of the sixth year must regularly attend these clinics, and must pass a satisfactory examination in these branches before they can receive their diplomas. According to sanitary regulations enacted since the unification of Italy, the largest cities must possess special hospitals [syphilicomia); smaller ones, special wards in their general hospitals; and cities with more than 20,000 inhabitants, at least a dispensary, for these diseases. By law, no impecunious syphilitic patient can be refused admittance.

The Hospitals.

MASSACHUSETTS GENERAL HOSPITAL.

Drs. Bigelow and Cabot commenced their service here last Saturday. A number of operations were performed. A case of hare-lip (complicated with cleft-palate) was that of a young adult who had been operated upon in infancy, and whose condition had been improved by Suersen's artificial palate. He now wished to have the appearance of the lip improved. Before operating, Dr. B. remarked that the success of this operation depended on a free dissection of flaps, and the removal of so much of the lip as would extirpate the notch, if possible, and make the labial edge unite in a straight line. He knew no better incision for the edges which were to be united than a straight one—the first stitch to be exactly upon the line of the labial mucous membrane of both sides, the second through the nostrils, with such subsequent and intervening ones as might be required.

A necrosis was of eight years' standing, and had followed an attack of scarlet fever. It was peripheral in character and located in the tibia. The periosteum had become much thickened, and was closely adherent to the skin for an area of one inch by five, with the loose bone as a centre. An incision of five inches was made in the axis of the tibia, down to the bone, the soft tissues scraped each way from the line of incision and the loose fragments removed. The softened bone which had made the bed of the sequestrum was then chiselled and gouged off by Dr. Cabot. He next excised a tumor of the neck, of nine years' duration, and about the size of a horse-chestnut. It had followed an attack of mumps, and was located in the superior carotid triangle, underneath the anterior edge of the sterno-cleido-mastoid muscle. An incision was made through the skin, and after a careful dissection through the fascia, the tumor was displayed attached to the posterior portion of the carotid sheath by a narrow pedicle; this was tied and the growth cut off, after which the vessels were tied and the wound sewed up.

Dr. Bigelow removed a congenital wen of the supra-orbital region, adherent to the periosteum, and also exhibited a boy ten years old with a fracture of the surgical neck of the humerus, caused by a fall from a tree three weeks before. Union had taken place during this brief period, but with deformity, resulting from the considerable projection of the shaft in front of the head of the bone. The patient had entered on account of the deformity, but his motion was good. Dr. B. advised against re-fracture.

H. H. A. BEACH.

Correspondence.

DOWN EAST, Oct. 25th, 1873.

MESSRS. EDITORS,—The information received by me concerning electricity was of great service, I assure you. Speaking of this subject to one of our craft, who lives less than a hundred miles from you, he gave me a little of his personal experience with electricity, which has been of very great use to my patients. He had seen the advertisement of electrical disks, and the recommendation of them in print by Boston physicians, even professors, and yet hadn't faith. By the way, why will medical professors allow their names to be used on quack medicine bottles? Some one who had them for sale said, "You laugh at this small battery. Did you ever try it?" "No." "That's enough; your opinion is of no consequence." Well, he thought differently; but for the sake of being able to say that he had tried it, he bought one, and had the salesman tuck it under his undershirt, upon his chest, before leaving the store. He went home to dinner. Before he got through, there was more irritation than a porous plaster would produce. So he rubbed it between whiles, and passed the afternoon visiting patients and rubbing his sternum. Towards the close of the evening, a brother practitioner called, to whom he acknowledged that he had on a disk; that it produced great irritation; that he believed it would blister; wished his friend would look at the spot, and see the reason for his believing a disk would produce counter-irritation, &c. The clothing was raised. The disk was there. The skin was red. The most remarkable part of the tale was, however, that he'd got the disk on wrong side out, the enamelled cloth being next to the skin, and the disk against his shirt. Now, see how this has been of use to my patients. You know, once, that they didn't know how to operate a telegraph without two wires; but they found that the earth would answer for one of the wires, and so left one off. It seemed to me that if one wire could be left out of that circuit, as the battery is not very powerful in this circuit, perhaps the battery could be left out. The enamelled cloth is quite cheap, and I thought the gentle irritation produced by it might be of service to some patient, who couldn't bear anything very strong, and thought he needed a plaster. You can buy a yard of it, and keep it on hand in sizes to suit purchasers. There are two or three colors, and, if you want to quack it a little, you can use the red for this complaint, the green for that, the black for something else. You can combine two of the colors in stripes, or three of them, if you please; or, in other cases, you can make radii of them. If you want a name, I would suggest the "Pleurodynia Plaster."

There are a number of little contrivances for producing cutaneous irritation. Cabbage leaf will do it; dock leaf will do it; but none of them are equal to enamelled cloth, for cleanliness. They are dirty and smell bad. One who is walking or riding about don't like to wear mustard. I remember, when I was very young, they used to raise blisters with boiled hammers. Old Dr. Twitchell, of Keene—peace to his ashes—once wanted to blister some one in a farm house, far from home. He had nothing with him to do it with. He asked the wife to find him a hammer. The article was brought out, put in the tea-kettle over the fire, and after the water steamed and bubbled well, he lifted it out and gently touched it to his patient in half a dozen spots over the seat of pain, with very positive effect. Boiled hammers were, for years, used in that neighborhood for pleurisy; and every old lady knew that nothing was equal to a hammer; and there was long a dispute, whether it should be a claw-hammer or not. I think the yeas finally conquered. Yours truly, RUSTICUS.

MESSRS. EDITORS,—The following history of nightmare, night terrors, or whatsoever name it may be designated by, is a physician-patient's description of his own case. Always, from earliest childhood, the victim of bad dreams, an inheritance shared with brothers and sisters, he knew well how to pity children who, by mistaken parents, are made cowards, in trying to learn them to be brave and conceal their fears. The record was made on the day after the dream, and while the impression was very vivid.

"I had barely recovered from an attack of acute rheumatism.

"Sunday, April 30th, 1848.—After a moderate dinner of beefsteak, bread and potatoes, with part of a glass of ale, smoked a cigar, and, feeling tired, threw myself on the bed with a book, and, after reading about ten minutes, fell asleep. Waked by bell. Went to office, returned and again fell asleep. Between this time and 2½ o'clock, had oppression of breathing, and waked four times with sense of suffocation. On three of these occasions, was wakened by my wife on account of dyspnœa. Twice, the dyspnœa was accompanied by dreams, not in themselves frightful, nor do I know if I breathed hurriedly on waking. Was very drowsy, and, though afraid to sleep, did not feel energy enough to rouse myself sufficiently to get out of bed.

"May 1st.—Do not remember anything out of the ordinary course. Dined on boiled fish. No extra fatigue. Quiet night.

"May 2d.—No extra work. Nothing unusual in the way of food, except that being out in the evening, was hungry, and took a bit of sponge cake with a glass of wine, and at 10.20 went to bed. Slept quite soon.

"The waking was attended with the following experience: I waked with a yell. The room was perfectly dark; but a male figure, darker than the darkness, and dressed in black, was standing by the bedside. Why I screamed, I do not know. I attempted to reach the object with my feet, and, as I kicked, it gradually receded towards the door of the room, vanishing at the same time. By the time the door was reached, it was so faint as to be hardly perceptible. My wife, wakened by my scream, raised and rubbed me, calling me by name. It seemed to me as if I were awake long before the yell ceased, and before the object disappeared. How long the vision lasted, I have not the slightest idea. Did not think to feel pulse, till I had been out of bed and returned. Found myself exhausted, and breathing rapidly, as if after violent exertion. Sensation of pain about fifth rib on left side, and intercostal space below, dull and not relieved by any change of posture. Pain not severe. If I recollect aright, the heart beat very hard. Feeling of exhaustion very great. Great drowsiness. Could not easily persuade myself of the unreality of the apparition, but would not go into next room to see. Determined to overcome fears. Was much surprised to find that it was only 11½, P.M. Pain continued till I fell asleep. Left lamp burning. Forgot, till after I returned to bed, to feel pulse, which was rapid and very feeble, compared to heart's impulse.

"This is the fifth or sixth time that this same figure has appeared. Its face, I cannot describe. It is indistinct. But I fancy the figure standing with folded arms or folded hands by the bedside, and staring in my face with a sorrowful look. Twice, I remember to have hurt my hand with the blow, which I struck at it, reaching towards it as it receded, the hand striking a chair. On one occasion, I fell from the bed, in the attempt to reach it. Only once before have I given such a yell upon waking. It was just a year ago, when recovering from an acute inflammation of the tonsils.

"Whenever I fairly wake after this appearance, I have not the courage to go to sleep again, that night, in the dark; and sometimes have searched the room first. Last night, I would not yield to the inclination.

"When I waked on Sunday, I called 'Henry' twice, and once 'Francis.' I am told that I generally call 'Henry,' and on several occasions followed it with 'Ellen.' In former times, was more subject to the Sunday trouble than of late. Have had it only four or five times in seven months.

"May 3d.—Did not wake again, till 6½ A.M. Felt very sleepy, but in other respects as well as usual. At dinner time, appetite poor. At 5½ P.M., very slight uneasiness, cannot call it pain, in left breast, over same spot as last night. Pulse 72. No dyspnœa."

This record was made, as is stated, immediately after the occurrence, with the intention of comparing it with any repetition of the same. On looking it over, the writer can only say that, from that date, over twenty-five years, it has never been repeated. The peculiar affection of Sunday afternoon has frequently occurred. He questions now, whether the night scene, which made so strange an impression, might not have been the first and only appearance. Perhaps some observer of psychological phenomena may be interested in the recital. *

Messrs. Editors,—Dr. Chenery says of his case of delirium tremens, related in the last number of the Journal: "This was not a case caused by leaving off his cups, but the direct effect of their excessive use." Query.—Who ever saw a case that was not so caused?

I certainly never did. I have seen men on the brink of the disease "leave off their cups," and go and have it; they would have had it, with or without their potations. Jas. O. Whitney.

Pawtucket, R. I., Oct. 22, 1873.

Messrs. Editors,—When examining recruits for the U. S. Marine Corps, last autumn, I met with the following anomalies. Seth W. Buffum had an extra nipple, perfectly formed, with areola, hair follicles, &c., about half the size of a normal one. It was situated three inches directly below the right nipple.

In two other recruits, the nipples were bifurcated.

2 *Dexter Row, Charlestown, Oct.* 17, 1873. Edw J. Forster, M.D.

Medical Miscellany.

M. Nelaton is said to have died worth over £280,000, of which his wife brought him £80,000.

There were 514 deaths in New York for the week ending Oct. 18th, of which 23 were by violence.

The beer and ale drinkers expand and grow fat, but they are not much given to profound researches in science.—*Med. & Surg. Reporter.*
Like the Germans we suppose.

We are sorry to learn that Brown-Séquard's *Archives* will end with the first volume. The receipts have not been sufficient to meet the heavy expenses. The *Archives* has contained many valuable papers, and will not be forgotten.

Suppressed Death from Chloroform.—So far as we know, no case of death from chloroform occurring in this city has been recorded; yet we have known of the occurrence of several within a comparatively short time.—*Philadelphia Medical Times.*

Any one who visits Chilwald, England, can read in the cemetery the following epitaph:

"Here lies me and my three daughters,
Brought here by using Siedlitz waters.
If we had stuck to Epsom salts,
We wouldn't have been in these here vaults."

—*Med. & Surg. Reporter.*

The following is a statement of the prevalence of, and mortality from, cholera in Russia during the five years, 1867-71:—

	Cases.	Deaths.
1867	33,382	13,609
1868	83	35
1869	911	510
1870	20,140	9,446
1871	305,929	116,981

Case of Wound of the Abdomen, with Protrusion of the Omentum: Recovery.—C. T., aged 16, was getting over a gate, on the top of which were several iron spikes, when his foot slipped, and he fell on the top of one of them. He did not feel much pain or inconvenience at the time, but shortly afterwards became sick and faint; but on recovering, he walked home, a distance of about thirty yards, and, as he then felt well, he did not mention the accident, nor did he examine himself to see if he were injured. He remained up until about ten o'clock, when, on undressing, he discovered, he says, "that his bowels were coming out." About an hour after this, my partner, Mr. Prideaux, saw him, and found, in the left inguinal region, a wound about an inch in length, through which was protruding a piece of omentum, about the size of an egg, the neck of which was rather tightly constricted. The omentum, not being gangrenous, was speedily replaced by relaxing the abdominal muscles, and employing steady pressure. The wound was then closed by a suture or two, and a compress and bandage applied. He passed a good night, and in the morning seemed in good spirits, having no pain, nor was there any tenderness over the abdomen. He was kept perfectly quiet in bed and on low diet for a fortnight, at the end of which time the wound had perfectly healed, and he was allowed to sit out of bed on a couch. Three days afterwards, he came down stairs, and on the next day I met him in the road, seeming perfectly well.—*British Med. Jour.*

The medical testimony in the Stokes trial presented the usual edifying spectacle of the evidence of men of various degrees of skill and respectability put on a perfect equality before a jury, to whom, out of flattery, we will ascribe ordinary intelligence, but who could not be expected to know which of the contradicting experts was to be believed.

Vesico-Vaginal Fistula complicated with Calculus.—Dr. Alves Branco relates, in the *Correio Medico de Lisboa* for July 1st, the case of a woman aged 25, who came under his care in the S. José Hospital on account of vesico-vaginal fistula, the result of injury in her first labor four months previously. The opening, which would, when first formed, admit the index and middle fingers, became reduced in diameter in four months to a centimeter (.39). She now complained of severe pain in the hypogastrium; and, a month afterwards, of heat and pain in the bladder, aggravated by the act of micturition. On passing a sound through the fistula, a calculus was detected. Dr. Branco made two attempts, with the interval of a week, to perform lithotrity; but failed in consequence of the impossibility of keeping the bladder full of water, and the extreme irritability of the organ. He therefore enlarged the fistulous opening on both sides by means of a probe-pointed bistoury, and removed a calculus as large as a nut. A month later, he united the edges of the fistula by silver wire sutures. The patient was discharged cured.—*Ibid.*

NOTES AND QUERIES.

We have received several answers to the query of X. P. Q. on counter-irritation; among these are mentioned acetic acid and chloroform. A cloth wet with either of these, when laid upon the skin and held there for a few minutes beneath a sheet of paper, answers the purpose well. We do not see that ammonia would be open to the objection stated. The tincture of the grains of paradise has also been recommended.

In answer to the "Inquirer" in your number of Oct. 16th, we are able to say that we have used Plantin's castor oil capsule for the last ten years, the result of which experience is that a single one is equal in effect to the ordinary one-half to one-ounce dose of oil for adults, and also that they are not suitable for children or delicate females, on account of their harshness. We know nothing of their "make up," but have always thought they contained croton oil, from the activity of so small a dose, and have governed ourselves accordingly. They are fit for adults alone, and their only advantage is their want of taste. We use them, quite often, to move the bowels, when necessary, the first time after delivery, in strong, or moderately strong women.

"Castoria" is found, on examination, to consist principally of senna, with some other cathartic and stomachic medicine in its "make up"; at least so says the *Druggists' Circular*, if I am not mistaken. Doctor.

Mortality in Massachusetts.—*Deaths in fifteen Cities and Towns for the week ending October 25*, 1873.

Boston, 120—Charlestown, 13—Worcester, 18—Lowell, 20—Milford, 5—Chelsea, 6—Cambridge, 20—Salem, 7—Springfield, 10—Lynn, 17—Fitchburg, 5—Taunton, 5—Newburyport, 6—Somerville, 8—Fall River, 23. Total, 283.

Prevalent Diseases.—Consumption, 35—pneumonia, 21—cholera infantum, 19—scarlet fever, 16—typhoid fever, 18.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, Nov. 1st, 111. Males, 48; females, 63. Accident, 3—abscess, 1—apoplexy, 2—asthma, 1—anæmia, 1—disease of the bladder, 1—bronchitis, 4—inflammation of the brain, 1—disease of the brain, 3—cancer, 1—cholera infantum, 3—consumption, 24—convulsions, 3—debility, 4—diarrhœa, 5—dropsy, 1—dropsy of the brain, 2—drowned, 1—diphtheria, 2—erysipelas, 2—scarlet fever, 7—typhoid fever, 11—disease of the heart, 4—intemperance, 1—disease of the kidneys, 2—disease of the liver, 5—inflammation of the lungs, 4—marasmus, 3—old age, 2—peritonitis, 1—puerperal disease, 2—enlarged prostate, 1—pyæmia, 1—suicide, 2—teething, 1—tumor, 1—whooping cough, 1.

Under 5 years of age, 36—between 5 and 20 years, 11—between 20 and 40 years, 29—between 40 and 60 years, 19—over 60 years, 16. Born in the United States, 70—Ireland, 24—other places, 17.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

SCARLATINA.

By S. W. Baker, M.D., Austin, Texas.

During the spring and summer, I have observed several short articles in the medical journals which deserve notice; especially one in the *Medical and Surgical Reporter*, written by Dr. William L. Martin, under the caption of Purgatives in Scarlet Fever. The sweeping condemnation of this class of medicines, advocated in that paper, appears to me entirely inconsistent with a sound and rational theory of the disease, whether deduced from a close study of its symptoms, or the pathological condition revealed by post-mortem examination. The disease is inflammatory; in severe cases, eminently so.

In epidemics of scarlatina maligna, and also in malignant sporadic cases, unless the symptoms are promptly and successfully controlled by antiphlogistic and sedative means, the disease hastens rapidly to a fatal termination. In milder cases, whether of sporadic, or of epidemic character, it differs not in kind, but only in degree; and, therefore, whatever medication is resorted to, it should be of the character above indicated. The instances are not rare, that these mild cases, when treated upon the temporizing plan, suddenly change their character, and assume a malignant form; and if they do not terminate fatally at once, are quite sure to be followed by those secondary forms of the disease which are so much dreaded by every physician who has had experience in their treatment. And here I wish to say a word in reference to the vexed question of secondary attacks. Scarlatina simplex, which, on its invasion, does not extend beyond the true dermoid tissue, if it continues unabated four or five days will extend to the pituitary and epithelial membranes lining the nares, fauces and auditory passages, one or all of them. When it does so, it is no longer the simple eruptive fever as it first appeared; but, added to that, is inflammation of those membranes and the subjacent parts, which hastens rapidly to ulceration or the formation of abscess. Now, when these symptoms occur in conjunction with the rash, I do not believe the patient is liable to a secondary attack; but the rash appearing alone does not protect against a subsequent attack of what was formerly called throat distemper; neither does this latter work an immunity against the rash.

"The disease first appeared in New England in 1735. Its first appearance was in Kingston, New Hampshire, from which place it continued to spread, east and west, for three years, and was, undoubtedly, the most malignant and fatal epidemic that ever visited the country. It obtained the name of canker rash."

It prevailed in England and on the Continent at the same time, and was the epidemic described by Dr. Huxham under the head of Malignant Ulcerated Sore Throat.

Its periodic visitations have been continued both in Europe and in this country until now—sometimes assuming a very malignant and fatal character, and at others, a form so mild as scarcely to require medical treatment. Such and so ample have been the opportunities offered for its study, both in regard to its nature and its treatment. And what does medical science teach us to-day? I fear, quite as much error as truth. In one instance we are told that "a small dose of castor-oil was administered in a mild case of the disease, and it soon became unmanageable, and ran on to a fatal termination." While induction fairly applied is a safe process of reasoning, it is hardly safe to draw inferences from one or a few facts, unless those facts are sufficiently numerous and uniform to establish a rule. Some have taken castor-oil and died; while hundreds have taken it and lived. Such reasoning may be summed up in the following formula: "post quam, ergo propter quam." Others, and they are many, tell us that bleeding is not a safe remedy, because it reduces the vis vitæ; all of which is required to resist the wasting power of the disease. This would be a valid argument, if its only effect were to depress the powers of life without exerting a controlling influence over the disease. But if the loss of five or six ounces of blood from a child three or four years old arrests in a large measure the congestion and subsequent inflammation and fever, it is a gain which can be secured in no other way. It places the patient in a condition to be benefitted by other remedies.* Others object to the free and liberal use of cold water to the surface, because of its tendency to repel the eruption. This would also be a valid objection, if the following assumptions upon which the objection rests were established facts: 1st. That the eruption constitutes of itself, or contains the *causa morbi.* 2d. That it is a movable cause and, if removed from the skin, will concentrate its action upon some internal and more vital organ; and, finally, that it can only be safely removed from the system by the process of desquamation. I submit, with all candor, that not one of the above positions can be maintained. Because cold water reduces the dry, sharp heat of the skin, and fades out the deep scarlet hue, and removes the mulberry eruption, with all its painful sensations, it does not follow that a retrocession has at all taken place; neither that a repellant power has in the least degree been exercised by the water. With as much propriety might it be said that because cold water removes the erythema and pain from a slight burn, the injury had thereby been repelled to some internal organ. All these are steps accomplished in the direction of a cure.

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* General depletion alone is here referred to, and it should be done as soon as possible after the invasion of the disease. Local bleeding by leeches, even for local tumors, has never, in my experience, been productive of anything but evil. The bites are always slow in healing, and their constant tendency is to result in eschars. The same is true of blisters, which, while they do no good, frequently result in serious evil.

And so of cathartics; it is said they weaken the patient, and tend to cause a retrocession of the eruption, and their direct effect is to irritate, inflame and ulcerate the bowels. On the contrary, a judicious use of these medicines is the proper and successful method of counteracting these evils. I do not believe that in one case in twenty the mucous membrane of the bowels is one of the organs or tissues primarily implicated in an attack of scarlatina.* "The raw, red appearance of the tongue," which has been cited as symptomatic of an irritated and inflamed condition of the bowels, is not so, but is the result of the local action of the disease upon that organ and the adjacent parts. It is in the latter stage of the disease, in the low, typhoid stage, if at all—when the mouth is filled with sordes, when the eschars have sloughed and left foul and gangrenous ulcers that yield a fœtid, ichorous and bloody discharge, that the bowels become tympanitic, and afford unmistakable evidence that they are involved in the disease. In cases extreme as this, no practice within my knowledge affords as reasonable hope for recovery as a mild, mercurial cathartic (calomel). The favorable action of this is promoted by enveloping the body from the hips to the arm-pits with several folds of domestic wetted with cold water, applied after the manner of the hydropaths. It is well to repeat this process so long as the abnormal heat continues.

A detailed description of the different forms of disease, through their different stages, is not embraced in my present design; but merely to show my views of its character or type, and, by inference, the mode of practice, and the remedies required for its cure. Its classification, by nosologists, with inflammatory diseases is, so far as I know, generally received by the profession; but no uniform mode of practice based upon this classification has been the result. This may be in part owing to an imaginary mystery which is thrown round the subject; viz.: that the disease is specific, the result of a specific cause, and, therefore, demands a treatment by specifics. This is undeniably a fallacy, and ought to be discarded. The disease is, indeed, specific; but the inference is the fallacy.

It is true, belladonna at one time obtained some reputation in this direction, both as a prophylactic and a remedy; but experience has failed to justify its claims. There are but two methods of treatment worthy of consideration; the one may be called active, the other passive. In the former, a vigorous antiphlogistic and sedative treatment is instituted to arrest the disease; or, failing to do this, to so modify and control the symptoms that it may pass with safety to a favorable termination. In the latter, the desideratum is to obtain and retain upon the surface a full eruption, until the period arrives for desquamation. The position is taken that the disease "must run its course," and, therefore, requires a sustaining treatment. Upon this subject there is room for a difference of opinion; and it can hardly be conceded that the disease must of necessity pass through all its stages; but if it were so, that treatment will most preserve the vital forces which most promptly and effectually controls the morbid actions. It is not the remedies, but the disease that prostrates. My motive in writing this paper was not so much to discuss the philosophy of the disease, as to advocate an active treatment for its cure; and the only argument now remaining must be drawn from a careful collation of facts. In order to contribute something to this end, I will give the result of my own observation and experience. In the year 1832, in the months of May, June, July and August, I treated 247 cases, most of which were of a very malignant type. My field of practice at that time embraced a part of Westbrook, Gorham and Windham, in the County of Cumberland, Me. I shall give the history of a few of those cases, premising it with a general plan of the treatment pursued.

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* Mr. Armstrong says, "You almost invariably find proofs of inflammation of the fauces, extending down the larynx, trachea and bronchi. In nine cases out of ten, the air-passages are inflamed." And the accuracy of this statement is borne out by Mr. Hamilton, in his observations on the epidemic in Edinburgh, in 1832. See *Edinburgh Medical and Surgical Journal*, vol. xxix. "The comparative frequency of inflammation of the mucous membrane of the bowels, dwelt on by Dr. Armstrong, is not admitted to the same extent by other observers."

In all cases where there was active inflammatory action, whether the eruption had or had not made its appearance, bleeding was the first prescription. The depletion was graduated by the effect it produced on the patient, and continued until the pulse became soft; and, if the eruption was out and quite florid, until it began sensibly to fade out. A moderately active cathartic, of jalap and calomel, or compound jalap powder, was next administered. I prefer the former. In all severe cases, the swellings about the throat and the anginose affection require early and particular attention. Folds of linen or domestic saturated with cold water were kept constantly applied to the neck and throat, so as effectually to keep down the temperature, and retard the swelling of these parts. In many cases, the water was slightly acidulated with vinegar; but this, while its effect upon the swellings was good, seemed rather to irritate than soothe the eruption.

And here I would observe, by way of parenthesis, that, since reading Dr. Adinell Hewson's book upon the use of clayey loam as a topical application in surgery, I believe it would better fulfil the indication in these cases than any other application. Wetted down with cold water, it would longer retain its moisture and temperature, the two qualities particularly requisite in these applications. I imagine, too, that the anodyne and sedative properties of the humus connected with these earths, would render them much more efficient agents than the water, however it might be applied.

In variola, where it is desirable to protect the skin, especially upon the head and face, from the disfiguring effects of pustular suppuration, might not the same means be used with happy effect? Perhaps nothing could more effectually prevent the congestion which is the first step in pustular formation than such an application. It would protect from the irritating effects of air and light, and secure a uniform temperature at any degree that might be desired.

But to return from this digression. Cloths, dipped in cold water and wrung sufficiently to prevent much drip, were kept constantly applied to the surface of the body and limbs, and changed so often as to secure a uniformly cool temperature. Under this treatment, quiet and rest were substituted for the febrile restlessness and burning of the skin. Constant care and watching were necessary to enforce this part of the treatment; otherwise, if neglected, the fever and eruption would return with increased intensity.

It only remains to notice the treatment pursued in the ulcerated throat which attended almost every case. A mixture of cayenne pepper, salt and vinegar, in water, was applied to every part of the throat by means of a swab. It was passed through the isthmus of the fauces back of the swollen and ulcerated tonsils so as to cause the patient to gag, by which action whatever of viscid mucus or sanious pus lodged there was thrown forward into the mouth and was wiped out. The importance of this part of the treatment is so apparent that it will not be neglected. Of the above mixture, the patient swallowed, every few hours; from a teaspoonful to a tablespoonful, according to the age, as a febrifuge and cordial.

The above statement is sufficiently full to explain the general principles, and all necessary details of my practice in 1832. With very few exceptions, no other medication was required. The three following cases, for reasons which will be given, did not receive the full benefit of the treatment.

Case 1st, May 8th.—William Brackett, 9 years old, seized with vomiting at 2 o'clock, morning. Vomiting continued half an hour, and was succeeded by pain in the head and back; great restlessness; pain in the throat, and intense fever and burning of the skin. At 8 o'clock, when I first saw him, a deep scarlet eruption had established itself over the entire surface, to the ends of the fingers, and so great was the congestion or swelling of the skin that it was difficult to entirely close the hand. The dorsum of the tongue, especially toward its base, was covered with a heavy, cream-colored coat; while the tip and edge were red and irritable. The tonsils, uvula and all the soft parts of the throat were greatly swelled, and of a deep mahogany color, showing distinct ash-colored spots, which gradually extended till they commenced to slough. The swelling of the parotids and all the glands at the angle of the jaws was equally sudden.

This was the case that, in my region of practice, ushered in the epidemic, and it was the first that came under my observation. I felt that I was exploring an unknown region, full of danger and uncertainty, and therefore must proceed with great caution. I feared to bleed, but in all other respects he was treated vigorously, according to the plan above indicated. His recovery was slow. The ulcers in the throat did not heal readily, and the swelling of the parotids and the glands about the throat remained for several weeks, but finally disappeared without suppuration. After the eruption had subsided and desquamation had, in part, taken place, the skin remained hot and dry, and the pulse hard and frequent. An ichorous discharge from the pituitary membrane excoriated the nostrils and lip. The bowels were constipated, and the secretion from the kidneys became small and of a dark brown color. Mercurial cathartics, with powders of nitrate of potassa, ipecac and camphor, and cremor tartari, whey constituted his medication. His recovery was complete.

The error of treatment in this case was the neglect of bleeding. Had this been performed at the onset, it would, with the treatment pursued, not merely have controlled, but subdued the inflammatory diathesis, and all that grave train of symptoms known as the sequelæ of the disease would have been prevented.

From the date of this case, the disease spread rapidly, and a large majority of the cases were of equal severity with this. Bleeding was now considered a matter of prime necessity in the treatment; and in no case where the attack was sudden and violent was it omitted; and in no case where it was performed was there reason to regret it. The recoveries were considered rapid, occupying from ten to seventeen days; and they were perfect, as no trace of any indisposition referable to the disease remained in the system.

The next case I shall present was fatal; and to it I shall append some remarks.

June 6th.—Joseph Emery, 4½ years old, well grown, healthy and vigorous, was seized with a fit of vomiting at 5 o'clock, morning. His symptoms were so nearly like those in the case above that it is unnecessary to detail them. The vomiting soon brought out the rash, which was general, and of the same malignant character as in Brackett's case. He was bled, had a cathartic, and cold water was applied to the surface of the body and extremities until the heat was reduced to the natural temperature, and the rash, with the puffiness of the skin, was quite removed. Cold cloths were directed to be kept constantly applied to the swellings about the neck and throat, and also to the orifice of the bleeding, which, by the way, was a necessary precaution in all cases where there was any abrasion or destruction of continuity of the skin; otherwise, a dry gangrenous action would set in, and dangerous eschars would be the result. I left him at 9 o'clock, in a very favorable condition, directing the application of the water sufficiently to keep down all increase of heat and redness of the skin. The infusion of pepper to be given every four hours.

Eight o'clock, evening.—All directions for treatment during the day had been entirely neglected, and every symptom had returned with increased intensity. For an hour and a half, I gave my undivided attention and effort to redeem the advantage which had been lost during the day. His condition was again entirely satisfactory. The necessity of good nursing had been so thoroughly vindicated that I had no doubt of an entire observance of all my directions in the future.

7th, 9 o'clock, morning.—The report of last evening is equally applicable to this morning. No effort had been made during the night to control the disease. The eschars in the throat were sloughing, and every effort to speak or swallow was intensely painful. The membrane of the mouth was parched and dry, and the teeth covered thick with sordes. It is unnecessary to continue the daily reports, as they would only show the uninterrupted progress of the disease to a fatal termination on the 12th. It is, however, necessary, in defence of the treatment, to state the following facts. There were two other cases, older brothers of this boy, in progress in the same house, at the time of his attack. Their ages were, respectively, thirteen and eleven. Their disease was of an equally severe and malignant type. The prescriptions in all these cases, allowing for the difference in age, were precisely similar. The difference in the result was entirely attributable to the fact that these boys were nursed by a paternal aunt, who was a sensible woman, and every direction was implicitly obeyed; while the youngest was nursed by his mother, who was a timid yet very obstinate woman, and no persuasion could induce her to do a thing in opposition to the boy's will. The treatment, therefore, in his case was rendered entirely abortive; while in the others it resulted in a rapid and perfect recovery.

I will now give a case of scarlatina complicated with croup.

June 18th.—Samuel Thomas, a healthy, vigorous boy, two years and three months old. Has been slightly indisposed for the last twenty-four hours; is fretful, has slight fever; pulse 98, and rather hard; skin dry; tongue not coated, but of a mottled, brownish appearance at the base; no perceptible swelling, but increased redness of the tonsils and uvula. Scarlatina was in the house, or his case would scarcely have excited attention. He had an emulsion of castor-oil, spts. terebinth. and spts. nit., after the action of which his symptoms were improved. A faint scarlet eruption appeared upon the neck, breast and body. A cooling diaphoretic mixture was prescribed, and continued to the fifth day of the disease, when desquamation commenced to take place. The skin still continued dry and rather hot, but the redness and eruption had disappeared. On the night of the fifth, a hoarse cough came on, and in the morning his case was unmistakably croup, or cynanche trachealis. He died the following night. Up to his attack of croup, it will be seen that he was treated entirely upon the expectant plan. It was a sad failure. Had he been bled at first and taken an active cathartic of calomel, I have no doubt the eruption would have come out freely and fully, and the result would have been different. The eruption once fully established on the skin and in the throat, and all the internal organs are relieved. It can be there successfully treated without the risk of retrocession.

The following case, though occurring four years subsequent to the epidemic, is of interest, as showing a rare form of attack. I find in my memoranda it is set down as scarlatina complicated with congestion of the brain. While I shall incidentally notice another case occurring in the same family and at the same time, it is the boy's case particularly to which I would direct attention.

1836, May 14th.—Was summoned to visit two children, the only children of E. Varney, a girl and a boy. Their ages were nine and seven years. The girl was the elder. The afternoon was pleasant, but the ground was damp and cold. They were at play in a grove, a few rods from the house. The boy suddenly fell down in a convulsion. The cries of the girl speedily brought assistance from the house; but before the boy was removed, the girl was seized with a fit of vomiting. I saw them at 5.30 o'clock, about two hours after the attack. There had been no sign of consciousness or sensibility exhibited by the boy from the time of his attack. His face was pallid, surface cold, and the pulse at the wrist only occasionally perceptible by a feeble vibration. In short, his appearance was entirely cadaverous. His friends had been actively engaged, using all the means within their power to restore warmth, sensibility and consciousness, but to no good purpose. The vomiting, in the case of the girl, had been immediately followed by a copious eruption, which unmistakably indicated scarlatina; and upon examining the throat, this opinion was abundantly confirmed. In the epidemic of 1832, many cases were ushered in with convulsions. I therefore believed the boy's attack to be of that character, and determined, if possible, to bleed. The temporal artery was cut, but only a few drops of blood seemed to exude from the skin. The head was depressed, and friction with hot flannels continued. After a few minutes, the artery of the other temple was cut. The blood dripped from this slowly, but evidently coming from the vessel. The flow increased, and now it dripped from both temples. After about five minutes, it was thrown out by a perceptible jet, and when about eight ounces had been taken, consciousness was somewhat restored. He knew his mother, and called her by name. He was now able to swallow, and occasionally a teaspoonful of the pepper mixture was given him as a stimulant and cordial. The friction was continued until a comfortable warmth was restored to the surface. A cathartic of calomel was directed to be given at bed-time, or sooner if the head should become hot and painful; and, in that case, cloths to be applied wet with cold water.

15th, 9 o'clock, morning. The boy's condition is much improved. The eruption is out upon the neck and breast full, and more faintly upon the body. Pain and heat of the head, redness and swelling of the tonsils, with difficult deglutition. The eruption continued to extend for three days. All these symptoms gradually subsided, and on the seventh day desquamation took place. His recovery was complete in fifteen days. In the girl's case, there was no complication to distinguish it from an ordinary scarlatina anginosa. The swelling, eschars and sloughing retarded her recovery beyond that of the boys.

I have remarked above that during the epidemic of 1832 I treated 247 cases. Of these, 5 were fatal, or a fraction ($\frac{3}{247}$) over 2 per cent. Since that time, in several milder epidemics, and in sporadic cases, I have found the same treatment equally successful.

A striking peculiarity will be observed in the two first and last cases I have given; that is the suddenness of the attack. In very many of the cases, and those were of the most malignant character, the premonitory symptoms, such as chills, alternate flashes of heat and cold, headache, pains in the back and limbs were entirely wanting, or unobserved. No complaint was made until the patient was suddenly struck down and overwhelmed with the disease. Cases occurred where children in a schoolhouse, standing in their classes for recitation, were suddenly seized with convulsions, or syncope, or vomiting. Two such cases I witnessed before their removal.

Austin, Sept. 16, 1873.

The Air-balloon in Childbirth.—The following are the conclusions of M. Vinoy *(France Médicale,* Aug. 9, 1873) with regard to the employment of the air-balloon in accouchements:—

1st. The balloon, introduced into the vagina, brings on uterine contractions.

2d. It will be found, either when employed alone or in conjunction with other procedures, to be a useful application in producing abortion and premature delivery.

3d. In cases of hæmorrhage of moderate severity, such as characterizes *placenta prævia,* the balloon serves as a tampon, and at the same time tends to bring on labor.

4th. It is especially applicable in those cases in which labor is delayed by a want of activity in the uterus. It restores the pains when they have ceased, and augments their intensity when they already exist, both during the stage of dilatation of the os, and during the expulsion of the fœtus.

5th. The application of the balloon is perfectly simple, and entirely exempt from any danger of accident.

Progress in Medicine.

REPORT ON OPHTHALMOLOGY.

By O. F. Wadsworh, M.D. Harv.

[Concluded from p. 456.]

Pathology and Treatment.

1. Ueber amyloide Degeneration der Bindehaut des Auges. Leber. Archiv f. Ophthalmologie, Bd. xix. Abth. 1.

2. On Conjunctival Transplantation from the Rabbit. Wolfe. Glasgow Medical Journal, Feb., 1873.

3. Operations-verfahren gegen narbiges Entropion und Trichiasis des Unterlides. Schneller. Archiv f. Ophthalmologie, Bd. xix. Abth. 1.

4. Fragments d'Ophthalmologie. De la greffe dans la traitement de l'ectropion. Martin. Ann. d'Oculistique, Mars-Avril, 1873.

5. Improved Lid-Forceps, especially for the operation of Entropium. Knapp. Archives of Ophthalmology and Otology, Vol. iii. No. 1.

6. Studien ueber Entzundung der Froschcornea. Pfungen. Med. Jahrbücher, Hft. 1, 1873.

7. Ueber die Regeneration der Hornhaut. Reich. Monatsbl. f. Augenheilk., Juli-Aug., 1873.

8. A Peculiar Form of Iritis which occurs in the Children of Gouty Parents. Hutchinson. Lancet, Jan. 4, 1873.

9. Ueber serose Iriscysten. Feuer. Monatsbl. f. Augenheilk., Apr.-Mai, 1873.

10. Ueber cystoide Entartung der Iris. Von Wecker. Monatsbl. f. Augenheilk., Sept., 1873.

11. Zur Kenntniss der Tuberculose des Auges. Perls. Arch. f. Ophthalmologie, Bd. xix. Abth. 1.

12. Der Hohlschnitt, eine neue Staar-Extractions Methode. Ed. v. Jaeger. Wien. med. Zeit., No. 27 et fol., 1873.

13. Die Subconjunctival extraction. Von Hasner. Wien. med. Wochensch., No. 36, 1873.

14. Zur Lehre von der Embolie der Arteria centralis Retinæ. Mauthner. Med. Jahrbücher, Hft. ii., 1873.

15. Embolism of Branches of the Central Retinal Artery. Knapp. Archives of Ophthalmology and Otology, Vol. iii. No. 1.

16. Observations on Defects of Sight in Diseases of the Nervous System. H. Jackson. Ophthal. Hosp. Rep., Vol. vii. part 4.

17. Beitrag zur Kenntniss der Entstehung der sogenannten Stauungspapille, &c. Michel. Arch. f. Heilkunde, Hft. 1, 1873.

18. Cases illustrative of the Use of the Ophthalmoscope in the Diagnosis of Intracranial Lesions. Weir Mitchell and Wm. Thomson. Am. Jour. Med. Sci., July, 1873.

19. Ueber ein eigenthumliches Verhalten der Corpuscula amylacea im atrophischen Sehnerven. Leber. Arch. f. Ophthal., Bd. xix, Abth. 1.

20. Intra-ocular Enchondroma, of twenty-two Years' Growth. Chisholm. With a description of the Microscopic Condition of the Tumor. Knapp. Arch. of Ophthalmology and Otology, Vol. iii. No. 1.

1. Leber, in the paper above referred to, describes, in great detail, a case of amyloid degeneration of the conjunctiva. The patient was a young man, otherwise healthy; the disease had existed less than five years; within two years from the commencement of the disease, and again a year later, portions of diseased tissue had been removed. The degeneration involved the greater part of the conjunctiva in both eyes, the conjunctiva of the sclera and especially of the fold being most affected. The thickening was caused partly by the presence of coarse, brawny nodules, partly by a more diffuse, brawny infiltration, both of yellowish, semitransparent appearance, and resembling somewhat the growth in diffuse trachoma. A portion of the strongly folded conjunctiva was removed with scissors, and much of the infiltrated masses beneath scooped out with Daviel's spoon. The degenerated parts consisted of numerous amyloid bodies of various size and shape in a clear, fluid, basis substance. In the scleral conjunctiva, amyloid bodies were imbedded in the adventitia of the smaller vessels, but the wall proper of the vessels was generally free. To some of the finer nerve branches, amyloid bodies were also attached. In other parts of the conjunctiva, were what appeared to be bundles of swollen, altered connective tissue, giving the amyloid reaction, and here the walls of the bloodvessels were thickened, amyloid. The amyloid granules and the degenerated connective-tissue bundles were enclosed in endothelial-like sheaths. Leber discusses this case in connection with three similar cases which have been reported in the last two or three years, and concludes that—

I. Amyloid degeneration appears in the conjunctiva of the lids, and also in the tarsus, as a purely local disease.

II. Clinically, it may be distinguished from trachoma.

III. The process consists in a development of amyloid bodies, or an amyloid connective tissue, both of which are enclosed by protoplasma sheaths containing nuclei. From the latter, the growth of the tissue appears to issue.

IV. The tissue of the amyloid growth of the conjunctiva has, therefore, in structure, and perhaps also in development, many analogies with normal connective tissue.

2. Wolfe narrates two cases in which he successfully transplanted a flap of conjunctiva from the rabbit to man. The first was that of a workman, in whose left eye the conjunctiva of the whole lower lid and of the corresponding portion of the globe, and a portion of the cornea had been destroyed by a burn. The result was the complete attachment of the lower lid to the globe, the edge of the lid reaching to the upper border of the pupil. In this state of things, there was not opportunity for an autoplastic operation, and it occurred to the author to try a conjunctival flap from the rabbit. He chose for the purpose the inner portion of the conjunctiva which covers the membrana nictitans, on account of its greater vascularity. Patient and rabbit were both chloroformed, the lid was carefully dissected free, the conjunctiva was removed from the rabbit's eye, and fixed by sutures so as to cover the raw surface on the man's lid. The only dressing was dry lint and a bandage. The next day, there was not more inflammation than was to be expected from the extent of the dissection; the transplanted flap had a greyish aspect. Warm fomentations were ordered. On the following day, there was complaint of much pain

and lachrymation. Any touch of the lid was painful. The new conjunctiva had, however, except in a few isolated spots, lost the greyish tint of the previous day, and was red and shining, at some spots offering the appearance of exuberant granulations. From this time, the swelling was checked and gradually diminished. On the fourth day after operation, the new conjunctiva was everywhere adherent, and the sutures were removed. At the end of eight days, the man returned home, the lid free everywhere, the movements of the eye good, the transplanted conjunctiva having preserved its vitality everywhere, except in one little grey spot the size of a pin's head. A few weeks later, an iridectomy behind the upper, clear part of the cornea restored vision. The second case was similar to the first, but the symblepharon was not quite so extensive. The operation was done in the same manner, only, instead of trimming off the superfluous portion of the transplanted conjunctiva after the sutures had been applied, it was left hanging. The different behavior of this loose bit of conjunctiva and that which was held in place by sutures could be easily followed from day to day. The free portion remained grey and loose eleven days after the operation, while the attached portion had resumed almost wholly its natural brilliancy. In this case, there was no sign of irritation of the globe following the operation, and the movements of the eye became free.

3. Schneller recommends a new operation for cicatricial entropion and trichiasis of the lower lid, which he has found to render excellent service. Two incisions are made through the whole thickness of the skin, parallel to the lid edge, and two to four mm. apart, the upper incision one and one-half to two mm. below the edge of the lid. These horizontal cuts are united at their ends by oblique incisions. The piece of skin thus included is left in place, care being taken to avoid injuring it, during the operation, in any way. The surrounding skin is loosened at the edges, just enough to make it a little movable (one-half mm.), and the upper and lower edges of the wound are drawn together *over the included bit of skin* by sutures. A pad of lint, placed over the eye, is retained by a bandage, and changed at the end of twenty-four hours. In four days, the sutures are removed, but replaced by strips of isinglass plaster, which, with the bandage, remain a day or two longer. Schneller found, some time after the operation, a firm cicatrix, somewhat thicker than the surrounding skin, which was movable over the underlying muscle. It would be interesting to know what becomes of the portion of skin thus buried. A similar operation, on the upper arm of a man, undertaken in the hope of later investigation of this point, did not succeed.

4. Martin lays down very exact rules for the treatment of various stages of ectropion by different forms of skin-grafts, the size and time of application of the grafts varying according to the conditions existing. It does not clearly appear, from the paper, that these rules are based on sufficient practical experience.

5. Knapp has modified Snellen's entropium forceps by enlarging the half-ring, so that when the forceps are closed it surrounds instead of lying upon the plate, and thus gives more room for operation. The direction of the handle is also changed, so that the same instrument may be conveniently used for either eye.

6. Pfüngen, from investigation of keratitis artificially produced,

takes the side of those who contend that the corneal corpuscles proliferate in inflammations of the cornea. In traumatic keratitis, he found, occasionally, corneal corpuscles, nearly divided into two parts by a fissure, and containing a nucleus in either part; and, after treating the corneas both with gold and silver, some corpuscles, generally such as contained many nuclei, were seen to be crossed by lines of silver precipitate, which pointed to a division of the cells and the presence of cement between them. All intermediate forms between corpuscles and wandering cells were present, and, in parts in which the increase of cells was most active, no unchanged corpuscles could be discovered.

Many experiments were made to determine the influence of the nervous system on the production of keratitis. Of six cases of simple section of the trigeminus without injury of the Gasserian ganglion, only one showed inflammation of the cornea. In this, there was a small white point of opacity near the centre, consisting of small, closely aggregated cell elements, the rest of the cornea being comparatively clear. When Gasser's ganglion was irritated, similar opacities were frequently found. These opacities lay in the anterior layers of the cornea, while in traumatic keratitis the posterior layers were chiefly affected. After removal of the eyelid in frogs, the cornea remained healthy during the four to ten days they were under observation; the same was the case when the trigeminus was cut, but injury of Gasser's ganglion caused, generally, great inflammation. Neither removal of the medulla oblongata, nor section of all the cerebral and spinal nerves on one side, nor extirpation of Gasser's ganglion in frogs, prevented inflammation from following a corneal wound. Neither the influence of the central nervous system nor that of the Gasserian ganglion would, therefore, seem absolutely necessary for the production of a traumatic keratitis.

7. Reich sought to determine, experimentally, the advisability of operative interference in cases of permanent opacities of the anterior layers of the cornea. To this end, he removed portions of the anterior layers of the cornea in rabbits. The amount of irritation following was generally not great; the newly formed tissue, which only partially filled the excavation made in the cornea, showed, by oblique illumination, very little lack of clearness at the end of several months, but the ophthalmoscope showed irregular astigmatism. The cause of the astigmatism appeared to be due, in part, to the imperfect transparency of the new tissue, in part to the unevenness of the anterior surface. He thinks the results of his experiments should not contra-indicate attempts to remove opacities of the cornea in certain cases.

8. Hutchinson describes a peculiar form of iritis which occurs at an early age in the children of gouty parents, and differs from other forms of arthritic iritis in being insidious and persistent rather than paroxysmal. Posterior synechiæ form without any attack of acute inflammation, the pupil is gradually occluded, and there is effusion behind the iris. In the later stages, opacities in the vitreous usually form. One eye is generally attacked first, and its vision is much diminished before the other is affected; ultimately, he believes that both eyes are almost always implicated. Only in one case has he observed entire loss of sight from the disease. The eye usually feels hot and uncomfortable at the time that adhesions are forming, and there may be slight

congestion of the conjunctiva, but the attack is, for the most part, painless.

9. Feuer describes a serous cyst of the iris, apparently following a wound of the cornea, which he convinced himself was formed in the tissue of the iris itself, since the iris-tissue could be traced under the microscope directly into both walls of the cyst; the outer surface of the front wall showed no epithelium, and the outer surface of the posterior wall was covered by the uvea. The interior of the cyst was lined with epithelium. The epithelial lining he believes, with Rothmund (JOURNAL, Nov. 14, 1872), was due to proliferation of a fragment of corneal epithelium carried into the iris-tissue when the wound occurred. He admits that serous cysts may arise from folding and adhesion of the iris, so as to form a closed sack, but cannot admit Wecker's theory that all serous iris cysts are formed in this way.

10. Von Wecker re-asserts his theory, relates several cases of blows on the eye, in which, without wound of the cornea, the lens was dislocated and the papillary edge of the iris folded backward, and, later, the patients appeared with extensive cystic degeneration of the iris. He denies that the appearances seen by Feuer prove that there was not in his case a folding and adhesion of the iris, and claims that they would have been equally present if the cyst were formed by such folding.

11. Perls has examined a case of general miliary tuberculosis in an infant, in which miliary tubercles were found, both in iris and retina. In the former position, they have before only once been observed; in the latter, never. For, although Bouchut asserted (*Gaz. des. Hôp.*, 1869, 1 and 2) that he had observed tubercles in the retina, both with the ophthalmoscope and at the autopsy, the descriptions he gives of the ophthalmoscopic and histological appearances are decidedly those of fatty degeneration, not of tubercle. The father of the infant had had syphilis, but was free from its symptoms since some time previous to his marriage; neither the child nor the mother had shown any signs of infection. At six months, a yellowish-white nodule appeared on the iris of the left eye, with slight inflammatory symptoms. The cornea soon became infiltrated, opaque, there was exudation in the iris and anterior chamber, and the cornea and sclera over and near the nodule were bulged forward. The affection was regarded as a gummy tumor, and treated as such, but infiltration of the upper part of one lung appeared, and with fever, and, finally, convulsions, the child died. Tubercles, recent and older, were found in the brain and most of the thoracic and abdominal viscera. The tumor of the iris was found to have pressed forward against the cornea, and backward it involved the ciliary processes. In great part, it appeared to be an inflammatory infiltration, but it contained, also, a number of miliary tubercles, characterized by the histological arrangement described by Wagner and Schüppel, namely, one or more giant-cells, moderately large cells, with two or three nuclei, and lymphoid cells, lying in a sort of meshwork formed by paler cells of very various form, with slender processes and surrounded by lymphoid cells. This arrangement was more plainly seen in the nodules of the ciliary processes, which appeared more recent than those in the iris. In the retina, the tubercles were situated in the anterior layers; the internal limitans was pressed forward by them, the finely granular

layer backward, and the radiating fibres (Müller's) pushed apart and crowded together at the sides. In the choroid, where tubercles have been so often found, none were present. The affection of the cornea appeared to be simply inflammatory; and the general infiltration of the iris, Perls regards as undoubtedly secondary to the tuberculosis.

12. Von Jaeger, who has been hitherto an advocate of the flap operation for cataract, now describes a new operation, which has given good results in the few cases he has tried it. The knife he uses is somewhat like Beer's, but is curved on the width of the blade, the curve being that of a cylinder whose axis is parallel to the back of the blade. The section does not vary much in position from Graefe's section, unless it is desired to avoid iridectomy, then it is made lower. He speaks strongly, however, in favor of iridectomy, whatever mode be employed, as offering better chances of success, though not equalling the best possible result without iridectomy. The advantages he claims for the operation are:—1. Formation of, as nearly as possible, a linear wound of size sufficient for the exit of the largest cataract. 2. Possibility of fixing the globe during the whole section without the use of forceps. 3. More or less complete retention of the aqueous till the completion of section. 4. The comparatively small increase of intra-ocular pressure during the section. 5. The relatively easy exit of the lens. 6. The increased comfort of after-treatment for the patient.

13. Von Hasner has modified the flap operation for cataract. He makes the section downward, as before, but in the sclero-corneal border, and forms at the same time as large a conjunctival flap as possible; does not divide the conjunctival flap entirely, however, but leaves a bridge, two or three lines wide, situated downward and inward. The lens is pressed out at the outer side of the bridge of conjunctiva. Finally, he divides the posterior capsule, as he has formerly done. The advantages of this operation over the old are said to be, that the conjunctival bridge prevents gaping of the wound and hastens its union, at the same time lessening the dangers of prolapse of the iris and exit of vitreous; over Graefe's operation, that the exit of the lens is easier and iridectomy is avoided.

14. Mauthner's paper is a very interesting and, on some points, instructive one. Hitherto, no satisfactory explanation of the temporary blindness which has in some cases preceded permanent blindness from embolism of the central artery of the retina has been offered. Mauthner had the good fortune to observe a case which appears to offer a solution of the phenomenon. The patient had observed, on waking, one hour and a half before, a failure of sight in the left eye, which varied in amount. During a rapid superficial examination, vision sank to quantitative perception of light, and immediate ophthalmoscopic examination showed nothing but such an excessive thinning of the retinal arteries that with the upright image they could be only followed as thin red streaks a short distance from the papilla. Iridectomy was proposed, with the hope that, by producing a sudden decrease of intra-ocular pressure, the supposed embolus might be driven forward sufficiently to leave some branches of the central artery free; but, by the time the instruments and assistants were brought, the vision had again become perfect and the appearance of the retinal arteries was normal. The explanation offered is, that one end of an embolus, borne

along in the ophthalmic artery, had entered the orifice of the arteria centralis and plugged it more or less completely, but, being too large to enter the artery entirely, was again torn out by the pressure of the blood current in the ophthalmic artery, on its projecting portion, and carried on into some other of the numerous branches of the ophthalmic. There, on account of the numerous anastomoses which exist, it need have given no sign of its presence. The correctness of the diagnosis of embolism is supported by the fact of existing heart disease and the occurrence, some months later, of symptoms of embolism of a cerebral artery.

The recent investigations of Cohnheim on embolism, and the renewed investigations of Leber on the connection between the ciliary and retinal vessels, are considered to throw no light on the subject of embolism of the arteria centralis retinæ. Indeed, the statement of the latter, that the connection between these vessels is only through capillaries, would only serve to render the symptoms which sometimes follow embolism of the arteria centralis more inexplicable. From the study of the symptoms and ophthalmoscopic appearances in such cases reported by Knapp, Fano, Hock, and in two which he observed himself, he believes that anastomoses of considerable size between ciliary and retinal arteries do occasionally exist before, or are formed subsequently to, the embolism.

15. Knapp reports three new observations of embolism of branches of the retinal artery. He thinks such cases are more common than has been supposed, and states that when a primary branch of the retinal artery is obstructed, there occurs superior or inferior hemiopia; when a secondary branch alone, a sector-like defect in the upper or lower half of the visual field is observed.

16. Jackson gives a *résumé* of some of the facts and opinions he has published within a year or two on matters of common interest to physicians and ophthalmologists. Under the head of epileptiform amaurosis, he treats of a class of cases in which there occurs a temporary affection of sight; either a failure of vision, or an "over-function"—development of colors, sparks, &c. Such cases are analogous to cases in which there are temporary subjective sensations of smell, and the affinities of both these temporary sensations are to epilepsy. In the cases he has seen, there have usually been other nervous symptoms, convulsions or loss of consciousness. The temporary affection of sight or smell may be called an aura; it is "part of a fit," the initial stage, and sometimes—if the fit is abortive—it will be the only symptom. Neither of the varieties of affection of vision is a localizing symptom, but if either be accompanied by an epileptiform seizure beginning deliberately in the hand, foot or cheek, it may be concluded that there is disease of the convolutions of the cerebral hemisphere opposite the side of the body on which the convulsion begins and near the corpus striatum. The fact that optic neuritis occasionally developes, and may leave permanent defective sight, shows that the association of temporary defect of vision with convulsions beginning unilaterally is not a chance one.

The combination of optic neuritis with convulsion beginning on one side, is to be regarded as of great importance, both as pointing to the locality and general nature of the disease. The neuritis alone does not aid at all in localization, but when it is combined with convulsion beginning distinctly in one hand or one side of the face, the disease is of, or involves, convolutions supplied by the middle cerebral artery, that is, in the neighborhood of the corpus striatum. The tie between the two symptoms, he thinks, is to be found in the distribution of the cerebral arteries. In the same way, the connection between subjective sensations of smell and temporary loss of consciousness is that the anterior cerebral artery supplies the olfactory bulb and a vast tract of convolutions, as well as a part of the corpus callosum. "Speaking very generally, symptoms are to be arranged, not only according to the functional divisions of the nervous system, but sometimes according to its nutritive, at least its arterial, regions." Optic neuritis does, however, point to the general nature of the disease. "If there be no optic neuritis, the fit does not, *in all probability*, depend on tumor nor on any sort of adventitious product. But if there be also double optic neuritis, we may conclude with confidence that the disease in the region of the middle cerebral artery is tumor."

The fact that acute neuritis may exist while the patient is able to read the smallest type, and is unconscious of any disturbance of sight, is rightly insisted upon, and hence the necessity of routine examination with the ophthalmoscope. Cases in illustration are quoted, in which the discovery of optic neuritis settled the diagnosis, the other symptoms alone being entirely insufficient. The importance of attention to very slight changes about the discs is pointed out, but it is acknowledged that, at present, some of these changes cannot always be distinguished from physiological peculiarities. Whether a tumor be situated in the cerebrum or cerebellum, he believes not to have the slightest influence on the ophthalmoscopic appearances of the neuritis. Uniocular neuritis very rarely occurs, even when but one cerebral hemisphere is diseased. With regard to deafness of nervous origin, Jackson thinks it never results from tumor of the cerebrum or cerebellum, but in this statement he excludes cases in which the tumor is so placed as to press on the auditory nerve itself; there, of course, deafness results. It is proper to say here, that when the word tumor is used by the author, it appears to be used not in any specific sense, but intended to include any adventitious product.

17. Michel reports a case of great pathological interest. The patient, a boy of 15, had been for many years entirely blind. No accurate early history could be obtained, but he was said never to have had acute disease. The skull was deformed, the intellect below par. For some years before death, there was seen, in both eyes, regressive choked disc. Death was from acute affection of the lungs. The optic foramina were found contracted, the optic nerves atrophied, and the outer sheaths distended by a mass of proliferated endothelial cells, which filled the subvaginal spaces from the eyes to the foramina. In the mass were numerous onion-like balls, resembling those in cancroid of the skin, and these often contained concretions in the centre. The endothelium of the surface of the inner sheath did not appear to take part in the proliferation. The outer sheath was thickened by a similar proliferation of endothelium in its fissures.

18. Mitchell and Thomson contribute several interesting cases in which the ophthalmoscope gave valuable assistance in the diagnosis of intra-cranial disease.

19. Leber, on examination of a case of atrophy of the optic nerve

and tracts, in which numerous corpora amylacea were present, found that each of these was enclosed in an apparently homogeneous capsule, on which no nucleus could be seen. On one side, the capsule was prolonged into a long and fine, smooth fibre, resembling exactly the greater portion of the atrophied nerve fibres. He arrives at the conclusion that the corpora amylacea arise from the nerve fibres, though his observations did not furnish the direct proof necessary to absolutely settle the question.

20. The tumor described by Chisholm and Knapp is of much interest, since it is the only case of intra-ocular enchondroma ever reported. It had reached a diameter of two and a half inches, and was still enclosed by the sclera, from which it seems probably to have started. Nodes of both hyaline and fibrous cartilage were contained in it, and Knapp was able to trace their development from the connective tissue which surrounded and separated them.

Sir William Fergusson.—The *Saturday Review* takes the late President of the British Medical Association severely to task, for rank heresy in matters pertaining to public health. In his recent address before the association, at its annual meeting, Sir William uttered some rather startling propositions, at variance with the generally accepted dogmas concerning the relation of disease to sewage. It is scarcely to be believed that this great English authority's conviction in the matter of sewage-propagation of typhoid is fairly and fully represented by the *Saturday Review*, but the criticism is very caustic and readable. The opening sentences are as follows:—

"There is an old saying that every man in the course of his life must eat a peck of dirt, and Sir W. Fergusson, the eminent surgeon, now gives us the comforting assurance that we must wash it down with a gallon or two of dirty water. It is impossible, he says, to get absolutely pure water, and therefore it is idle to take the trouble to procure approximately pure water. As we must drink dirty water, the best thing we can do is to shut our eyes and hold our noses, and gulp it down regardless of consequences. This is really the gist of Sir W. Fergusson's address, and no more mischievous public utterance has, we venture to say, been made in our day. . . . . . Sir. W. Fergusson has thrown all the weight of his great authority into the scale on the side of dirt and disease."

And again: "For an eminent doctor to lift up his voice against fastidiousness in regard to pure water, strikes us as pretty much the same thing as if the Bench of Bishops were to take to preaching against undue sensitiveness with regard to sin. Absolute purity, they might say, is quite unattainable; the best of us are bad enough when put to the test, and therefore it is not worth while to make ourselves uneasy about a few spots more or less."

Finally: "A little loose talk may be allowed to politicians without much fear of the consequences, but doctors, of all people in the world, should be careful what they say."

The criticism in the *Saturday Review* is pungent but logical.

Bibliographical Notices.

Body and Mind.—An enlarged and revised edition. By HENRY MAUDSLEY, M.D. London: Macmillan & Co. 1873. 12mo. Pp. 342.

THIS new edition of a well-known book contains the three Gulstonian Lectures, delivered before the Royal College of Physicians in 1870, with an additional one on Conscience and Organization, read at the opening of the Psychological Section of the British Medical Association in 1872. Two new psychological essays have also been added, on Hamlet and Swedenborg. The first edition was so briefly noticed in this JOURNAL that it may be well to glance at the three original lectures, as they conduct, by natural sequence, to the fourth.

Lecture I., on the Physical Conditions of Mental Functions in Health, is a careful tracing of the development of mind from the earliest and humblest manifestations of animal life. Reflex Action, Purposive Acts, Secondary Automatic Acts, Sensori-motor Acts, Education of Nerve Centres, Memory, Volition, Mental Organization, Motor Intuitions, Gesture Language, Muscular Expression, and Organic Functions and Sympathies—these are some of the running titles by which the scope of this lecture is made evident.

Lecture II. considers Certain Forms of Degeneracy of Mind, their Causation, and their Relation to other Disorders of the Nervous System. It treats of the heredity of idiocy, and Dr. Howe is quoted to prove that one-half the idiots of Massachusetts are offspring of intemperate parents. The pedigree of an idiot, traced by Morel, through four generations, showed seven or eight degenerative varieties. Many remarkable instances of theroid (beast-like) degeneracy are given in detail, which tend to support Mr. Darwin's views. The brain weights of distinguished individuals are compared with averages of civilized men, savages, Hottentots and Bushmen. The degeneracy of the insane neurosis, or temperament, is discussed and illustrated, showing the tyranny of organization over the *moral sense*, especially.

Lecture III., on the Relations of Morbid Bodily States to Disordered Mental Functions, deals with the forms of insanity more directly. Many of the terms employed are those of the attempted causal classification of Dr. Skae.

Lecture IV. is the new one, on Conscience and Organization. It is a bold and reasonably successful effort to deal with a subject which the teachers of many centuries have ignored; and to-day, many men of scientific ability, in treating it, abandon the scientific method, with a blindness to facts and reason not to have been expected of them. The higher attributes of mind cannot be dissevered from their lower and physical relations. Dr. Maudsley shows that the Greeks entertained more enlightened views of the nature of madness than prevail even at the present day. Plato, Aristotle and Hippocrates repudiated the notions of the Greek poets, that one disease was more divine than another. The latter assert that all madness is of purely physical origin, amenable to medical and moral treatment. Philosophy, which mounted so high in the Grecian era, was lost beneath waves of ignorance and superstition in the middle ages, and when a revival of learning occurred, "scholastic subtleties and metaphysical mysticism" took its place, and prevail, more or less, to-day. Theology has made common cause with metaphysics in resisting the inroads of scientific inquiry into the domain of conscience. We have but just regained the stand-point of the Greeks, and are in position to include in our physical researches the highest functions of mind, the moral sense and the will.

Science does not propose to bridge over the gap between nerve elements and mind. It probably can never demonstrate the real nature of the mental force, nor leap from the movements of the nerve molecules to consciousness. The *how* and the *why* of certain uniformities of sequence between nervous and mental phenomena it does not even aspire to know, any more than to know the actual causes of heat, electricity or gravitation. These are all alike mysteries, but the regularity and certainty of certain sequences may be known, and the laws of the relations between matter and mind, in its highest departments, may and should be thoroughly investigated.

Dr. Maudsley's statement that Milton found no difficulty in believing that matter was capable of intellectual functions, has shocked some of his critics, but it is amply borne out by quotations, both in prose and poetry. The criminal neurosis, the criminal psychosis, and the heredity of crime are next discussed, and arguments are drawn from the frequency of moral impairment in insane families, as well as among the insane, to prove that the highest attributes of mind are, like the lowest, largely dependent on cerebral organization.

The essays are interesting and instructive, but space will not permit their consideration here. T. W. F.

BOOKS AND PAMPHLETS RECEIVED.

Report of the Executive Committee of the Roxbury Charitable Society. 1873. Pp. 15.

Observations on the Surgical Treatment of In-growing Toe Nail. By George Stillwell, Surgeon, Epsom, with a pamphlet by Dr. Cotting, Boston, America. Second Edition. London: J. & A. Churchill. 1873. Pp. 12.

Evidences of Life in the Newly Delivered Child. By W. R. Atkinson, M.D. Pp. 3.

To Cook Rice.—The following is an account taken from an old number of the *Gazette des Hôpitaux,* of the method recommended by the French Academy, for cooking rice, during the siege of Paris :—

Take one cup of rice and one-fourth of a cup of water in a saucepan—cover and place over a good fire; after an hour the water will be evaporated and the rice cooked, tender, but dry and with the grains distinct—not in a paste; sufficient salt should be added in the first place, and care should be taken not to disturb the rice whilst cooking.

By adding a little butter, and allowing the rice to dry a little more over a gentle fire, a more delicate dish is prepared.

Rice cooked in this manner, which is the same as that employed in the East Indies, bears the same relation to the indigestible paste of the New England kitchen as does bread to boiled flour.

Boston Medical and Surgical Journal.

Boston: Thursday, November 13, 1873.

BOSTON LYING-IN HOSPITAL.

An institution, bearing the above name, and incorporated by the Legislature of Massachusetts, is situated at No. 24 McLean Street, in this city. Its officers are as follows: President, Charles Hamilton Parker; Vice President, Francis Boyd; Treasurer, Thornton K. Lothrop; Secretary, F. A Hall.

Directors, Charles G. Putnam, M.D., Abbott Lawrence, Charles E. Ware, M.D., James Ayer, M.D., Thomas Hollis, Horace Dupee, M.D., William Amory, Samuel K. Lothrop, Thomas Restieaux, Uriel Crocker.

Francis Minot, M.D., John P. Reynolds, M.D., C. E. Buckingham, M.D., Consulting Physicians.

Henry Tuck, M.D., William L. Richardson, M.D., Attending Physicians.

We wish to call attention to this institution in consequence of a concern which has taken the name of Boston Lying-in Hospital, on the corner of Kendall and Tremont Streets. By what right they have assumed the name, we do not know. The list of their officers, as published in the daily papers, we give below.

Directors, James McDonough, Martin Betts, P. H. McGlynn, James McCormick, Richard Roach, Benjamin Ellison, Thomas S. Monahan, Robert Maxwell, Hubert Smith, M.D., the Hon. John Ellis, George D. Pettee and T. H. Smith, M.D.

At a meeting of the directors, a board of officers was elected as follows:—

President, J. H. Smith, M.D.; Treasurer, Robert Maxwell; Recording Secretary, James McCormack; Corresponding Secretary, Hubert Smith.

The report of the directors says, so the papers say, that during the year thirteen hundred and forty-six patients have been treated, in and out of the house, and that *in three days* previous to the annual meeting *there were two hundred and six applicants.*

We should like to call the attention of the daily press to the list of names, and to their absurd statement, which is evidently intended to advertise something.

Though we have not yet complied with the request of the *British Medical Journal* to express an opinion upon the last case of alleged death from ether in England, it should not be inferred that we have been in doubt as to its cause. Our desire to present a careful and comprehensive view of this case, and, once for all, to elucidate this and similar occurrences, so far as we may be able, has led us to refer the matter to a gentleman, who, from his experience in the administration of ether from the date of its introduction and from his intimate knowledge of its surgical relations, is, perhaps, better qualified than any other to express an opinion upon this subject. He has kindly promised to furnish us for our next issue some remarks upon this question.

A STEP which, in spite of its ludicrous character, is of some importance in settling the question of the admission of females to the Massachusetts Medical Society, occurred on Nov. 5th. This was the union of the New England Female Medical College to the so-called medical department (Homœopathic) of Boston University. The importance is that the graduates of the institution are excluded from all professional recognition. The ceremonies celebrating the union were novel and varied, including speeches, music and verses; but a tinge of sadness was imparted to the closing, by a lady's singing "Good night, my heart," which showed but too plainly that it was a match of interest rather than of affection.

THE result of the State election, on November 4th, is gratifying, for it appears likely that a majority of the new legislature will be in favor of modifying, perhaps of repealing, the present obnoxious and demoralizing liquor law.

We have no hesitation in announcing our determined hostility to the present state of affairs, and hope, at the proper time, to give our reasons in detail. No one has the right to accuse us of being unfriendly to the cause of true temperance, for the law has produced nothing but opium-eating, secret drinking, hypocrisy, black mail and State constables.

FOREIGN BODY IN THE BLADDER. EXTRACTION. PERITONITIS. DEATH.—A lead-pencil having been introduced into the urethra of a young man, aged twenty-seven years, slipped from the fingers, and disappeared in the canal and, as commonly happens in such cases, very soon found its way into the deep portion of the urethra. Subsequent attempts at extracting the pencil had the effect of pushing it completely into the bladder. Five days after the accident, the patient entered *Hôpital Saint Louis.* He was found to be in a state of great mental anxiety, and complaining of pain in the lower portion of the abdomen. Although micturition was performed without difficulty, the root of the penis, the scrotum and perineum were all greatly swollen, red and œdematous. The symptoms being urgent, perineal section was resorted to without delay by M. Péan, and the lead-pencil easily extracted. It was found to measure about four inches in length, the blunt extremity being first introduced. The extraction of the foreign body was not followed by a diminution of either the general or local symptoms, and death ensued in the course of a few hours, with the usual signs of severe peritonitis, the explanation of which was revealed by the autopsy. On the floor of the bladder, a small infundibuliform *perforation* was found, penetrating the entire wall, and produced evidently by the point of the pencil. This perforation had given passage to a quantity of urine which, infiltrating the tissues of the pelvis, had been the origin of the severe symptoms to which the patient had succumbed.

This example serves to illustrate the disastrous effects of sharp-pointed objects upon the mucous membrane of the genito-urinary apparatus, and the possible necessity, in similar accidents, of recurring at once to perineal section, without wasting time in attempts at extraction by the urethra, which too often have only the effect of increasing the inflammation produced by the presence of the foreign body.—*L'Union Médicale,* Aug. 21, 1873.

The Hospitals.

MASSACHUSETTS GENERAL HOSPITAL.

THE operations on Saturday last were as follows:—excision in two cases of chronic mammary tumor, and in a case of tumor of the leg; the exploration and removal of part of a carious rib, and the removal of necrosed bone from the tibia and ulna.

The first mammary tumor had grown gradually without pain. It was about the size of a hen's egg, and was quite defined and free in the substance of the gland. The patient was a married woman, twenty-six years of age. Dr. Cabot removed the growth.

The second was smaller than the one just described, but its attachment was deeper and pediculated. It had been growing two years, accompanied with pain. The patient was twenty years old and married. The tumor was excised by Dr. Bigelow, and the wound left open to forestall the deep burrowing of pus.

The tumor of the leg, in size that of a walnut, was recurrent, and had followed the removal of a fungoid growth by caustic, about a year before. It was movable, obviously based upon the skin, and was located below the tubercle of the tibia. It was removed by Dr. Cabot.

The sinus above alluded to, was situated on the left side of the back, and was the result of a gun-shot injury received at the battle of Antietam, ten years since. He had profuse hæmoptysis at the time of the injury. Numerous pieces of bone had been discharged through a fistula near the spinous processes and over the sixth rib. A probe, entered there by Dr. Bigelow, passed several inches upward to the fourth rib, where rough bone was detected on the upper edge. The sinus was largely laid open and the carious bone removed by a spherical rasp.

Dr. B. then exhibited a man with enormous distention of the internal saphenous vein. He called attention to the fact that, while there was a general distention of the cutaneous veins of the foot, in the leg the disease was chiefly confined to the main trunk. An indurated swelling of some size, occupying the saphenous opening, was supposed to be due to local inflammatory action in the vein, and was not a morbid growth. In varix, and especially so large a one, the deep veins of the leg are usually implicated, and surgical interference, whether by caustic, ligature or excision, besides subjecting the patient to some risk, affords only temporary relief. As a rule, in varix, he advised no surgical operation. An elastic stocking was recommended.

Dr. Cabot operated upon the tibia of a young adult, with necrosis. The disease was central, and required extensive removal of the involucrum with a chisel and mallet. He also removed a superficial fragment from the ulna of the same patient. H. H. A. Beach.

BOSTON CITY HOSPITAL.

Last Friday, November 7th, Dr. H. W. Williams operated for enucleation of the eye-ball. The patient had been struck, several years previously, by a fragment of an exploding shell. Besides loss of vision, he had suffered from repeated inflammatory attacks of the eye. The sensitiveness of the affected organ, shown by these renewed inflammations, gave good reason to anticipate the occurrence, sooner or later, of sympathetic ophthalmia in the other eye. On this account, enucleation was performed under ether.

The eye-ball, on removal, was found atrophied, its tunics partly disorganized, and from the ciliary region an exudation into the vitreous had taken place. There was no trace of a foreign body.

Dr. Fifield operated for necrosis following double fracture of the lower jaw. The fracture had been caused by very slight violence—a moderate blow from the fist of a companion of the patient. The usual means to secure union had failed. One fracture was near the symphysis, the other through the ramus; the former was the seat of the necrosis. The sinus was enlarged by a crucial incision, whose flaps were dissected from the bone. Several fragments of necrosed bone were readily removed, leaving a portion behind; efforts to remove the latter were attended with too much straining of the still imperfect union, and this part was allowed to remain to exfoliate.

Several cases are under treatment in the surgical wards of the City Hospital which illustrate the practical utility of Dieulafoy's aspirator. Dr. Fifield showed a case of metastatic abscess which had been cured by means of this instrument. The patient, an adult male, had been injured on the railroad, the wheel of a locomotive having greatly bruised the elbow, fracturing the external condyle and lacerating the soft parts extensively. It was decided not to amputate or resect, but to leave the case to take the chances of recovery without operative interference. Much sloughing about the injured part followed. Three days after the injury, a chill occurred, followed by typhoidal symptoms, tympanites, enlarged liver, sallowness, increased temperature, and all the symptoms of pyæmia. Then a fluctuating swelling was discovered on the right hip, behind the great trochanter. This was punctured with a fine (No. 1) needle of the aspirator, and nearly a quart of pus was withdrawn. Every morning subsequently, during the next three weeks, the aspirator was used, the matter withdrawn varying in character from laudable pus to clear serum, and gradually diminishing in amount until, at the last puncture, only three ounces came away. The abscess, then left to itself, quickly disappeared. The patient's improvement in general condition kept pace with the persistent daily evacuation of the pus, and, except ulceration at the seat of the original injury, he is now well.

Two cases of acute abscess have been similarly treated by Dr. Gay, and with similarly good results. In both instances, the abscess was located in the thigh. One originated without injury, in connection with a varicose ulcer; here, the aspirator removed, at first, three ounces of pus, then, a few days later, two ounces, then, finally, an ounce and a half. After a few days, the parts were fully restored.

The other case resulted from the blow of a fall on the hip. A week after the injury, an abscess developed, the termination of extensive inflammation of the soft tissues. The aspirator was used, and ten ounces of pus came away. After five days, the operation was repeated, and two ounces of bloody serum was discharged. Another puncture will be made, to remove the little now remaining in the greatly contracted sac.

In two cases recently, the aspirator has been employed to relieve the bladder in retention of the urine; one instance was the result of spasmodic stricture following a debauch, the other a case of enlarged prostate in a man eighty-six years old. The aspirator was used twice in each case, with perfect success, the puncture being made above the pubes, and causing less pain than the attempts to pass the catheter.

In all these instances, the needle used was of the smaller, if not the smallest size.
F. W. DRAPER.

Correspondence.

LETTER FROM DRESDEN; NEW HOSPITAL.

DRESDEN, Oct. 4, 1873.

MESSRS. EDITORS,—The various novelties and improvements which have been introduced into the new surgical hospital now being erected in this city, and which are highly commended by the physicians in charge, render it well worthy of a visit from passing medical men.

The general plan struck me as not unlike that adopted in the fine hospital at Leipzig, the accommodations for surgical patients consisting of a central stone building, three stories high (as yet unfinished), connected by means of covered passage-ways, with several brick pavilions, each capable of receiving thirty patients. The wards in these pavilions are capacious and well lighted, and have small bathing rooms attached, while the arrangements for regulating the temperature and ventilation are remarkably good. Each building has a double roof, and a basement, the floor of the latter being two or three feet below the surface of the ground. In each of these basements are two furnaces of moderate size, the heated air from which is conducted directly into the ward above by means of two pipes, which rise in the ward a distance of about six feet from the floor, so as not to inflict any direct draught upon the surrounding patients, and, being covered by ornamented tiles, bear a close resemblance to the ordinary German stove. The hot-air chamber communicates with the free air of the basement, and, by the aid of dampers, the supply of cool or hot air may be regulated at will. In summer, the same registers are made use of for lowering the temperature of the wards, by giving passage to the cool air of the basement. A draught is created by connecting the atmosphere of the ward with the air contained in the space within the double roof, whence it passes off into the open air. The communication between the air of the ward and the space between the two roofs is established by means of twelve iron pipes let into the wall, each pipe having two openings that may be closed at pleasure, one opening being near the ceiling and the other near the floor. In very warm weather, the air between the two roofs being heated by the rays of the sun, rises and escapes, and its place is at once supplied by the air from the ward beneath, and thus by means of the registers a direct current is established from the basement into the ward. If the heat is excessive, the cemented floor of the basement is sprinkled with cold water. The evaporation of this water, which is aided by the large open windows on each side, serves to bring down the temperature by several degrees, and the warmer the day, the more rapid will be the current of air upward. As a matter of fact, it has been found, after an experience of two summers, that in the warmest weather, the temperature of the wards could be kept in the vicinity of 72¼° to 74¾° Fahr. Of course, the arrangements above described also serve for the purpose of ventilation, but to secure even greater purity of the atmosphere, each pavilion is provided with four chimneys, three intended to carry off the smoke from the furnaces and from the smaller fire used in heating water, and one solely for ventilation. These chimneys have an iron pipe running through the middle, through which the smoke escapes, while the intervening space between the pipe and the brick sides communicates with the wards. It will be understood that a current is established between the wards and the chimneys by means of the heat derived from the iron-smoke pipes. All the chimneys are provided with open grates, by means of which the wards may be heated and ventilated when there are no fires in the furnace.

The practical working of this system of ventilation was certainly excellent, and I found the air of the wards perfectly free from those peculiar odors that are generally considered inseparable from a hospital ward.

Yours truly, E. H. BRADFORD, M.D.

EXAMINATION OF WATER FROM THE WELL OF THE BAY VIEW HOUSE, AT MT. DESERT, ME.

MESSRS. EDITORS,—The following is the result of an examination of a specimen of well water received from Dr. Wm. J. Morton, and referred to by him in an article on "Typhoid Fever at Mt. Desert." (Vide the JOURNAL, Oct. 30th, p. 421.) The water was, unfortunately, received so late that it was impossible to complete the analysis in time for the publication of the results with Dr. Morton's article.

The vessel in which the water was received was tightly closed with sealing wax, so that contamination of its contents by external substances was avoided.

The water, on removal from the vessel, had a specific gravity of 1001 at the temperature of 14½° R. (= 64½° F.). It was very turbid, the sediment appearing white when in suspension in the water, but after settling it had a light brown color. Its odor was vile, resembling that of bilge water, and the presence of sulphuretted hydrogen was easily distinguishable, not only by the odor, but also by the fact that a piece of bibulous paper, moistened with a solution of acetate of lead, was turned black immediately when introduced into the vessel containing the water.

A determination of the solids resulted in the following figures, calculated so as to give the number of grains contained in a United States gallon of 231 cubic inches:—

Inorganic - - - - - -	9.901
Organic and volatile - - -	7.711
Total residue - - - - -	17.612

The amount of sediment was so great as to render a layer of the water one inch in thickness non-transparent, and a microscopic examination revealed in it the presence of ordinary animalculæ, vibriones and fungi, such as are seen in liquids containing decomposing organic matter.

The above examination, although very hastily performed, gives results which prove beyond a doubt that the water is totally unfit for drinking purposes, and that it must be contaminated in some manner by drainage. The sulphuretted hydrogen must have been formed by the decomposition of some organic material which contains sulphur, such as albumen, and its presence is in itself sufficient evidence of the preëxistence of such organic material in the water.

The sediment and vile odor were developed by decomposition of the organic matter contained in the water after its introduction into the vessel, since Dr. Morton describes the water, when fresh, as "clear and sparkling."

EDW. S. WOOD, M.D.

MESSRS. EDITORS,—I desire to state that the notice of the appointment of Dr. Wm. P. Brechin as aural surgeon to the Boston Dispensary, which appeared in your JOURNAL of October 23d ult., was wholly unauthorized by me. No such appointment has been made.

Absence from the city has prevented an earlier denial of the appointment.

Yours, &c., A. L. HASKINS, M.D.,
Superintendent of Boston Dispensary.

264 *Tremont Street, Nov.* 6, 1873.

Medical Miscellany.

SMALLPOX is stated to be prevalent in Newark, N. J.

AMERICAN MEDICAL GRADUATES.—The various American medical colleges have graduated this year about twelve hundred students.

THE city government is taking steps towards a public park. This is as it should be, but there is one public improvement of greater urgency which must not be overlooked—that is drainage.

THE American Public Health Association convened in New York on Tuesday of this week. Many interesting topics are announced for discussion during the three days' meeting.

JUST as we go to press, we learn that a death from ether is reported to have occurred on the 10th, in the practice of a dentist of this city. We have not had time to obtain many details, but we understand that the anæsthetic was undoubtedly CHLOROFORM, or a mixture of chloroform and ether.

PROF. STRUTHERS has caused a good deal of discussion in England by a paper on the Appendix Vermiformis, read at the late meeting of the British Association for the Advancement of Science. He maintains that it is useless and injurious, and consequently a vestige of a useful organ in a lower form, and consequently again, a proof of evolution. If it were useless, according to the doctrine of evolution, it would show signs of gradually disappearing, which is not the case. Its walls are full of well-developed glands, showing that it has a purpose, though we do not as yet understand it.

BAD TEA.—The question of spurious or injurious tea seems to be growing important. The Chinese have discovered that tea-leaves mixed with dung, iron filings and other substances, all powdered fine, suits the English market, and are sending compounds of that sort over in huge masses, of course not without connivance from some English dealers on this side. On Tuesday, it was alleged by the Sanitary Commissioners of the city (London) that no less than 10,000,000 pounds of such tea, totally unfit for human food, was in bond ready for sale. The quantity would, we believe, be greatly increased if partially adulterated tea were added to the list.—*Spectator.*

PHARMACEUTICAL ERRORS.—A Marseilles chemist has been condemned to pay a fine of 100 francs and damages of 200 francs for delivering a mischievously excessive dose of arseniate of soda (beyond what the physician had prescribed). The patient showed symptoms of arsenical poisoning. The apprentice who prepared the draught was acquitted.—*Brit. Med. Journal.*

AFTER attacking a large number of persons—amounting, up to September 1, to 104,000—the cholera has decreased in Hungary; but in place of it pernicious fever has occurred, and has threatened to prove formidable. It has, therefore, been suggested to retain for the present the services of the medical men who were sent into the various districts to attend the cases of cholera.—*British Medical Journal.*

THE MUSCULAR SUBSURRUS IN RELATION TO THE FŒTAL HEART-SOUNDS.—At a recent meeting of the London Obstetrical Society, Dr. J. Braxton Hicks called attention to a point with regard to the diagnosis of pregnancy and the life of the fœtus by means of the existence of the fœtal heart-sounds, which he had not unfrequently observed in the course of his practice, but which he did not remember to have seen in print, and summed up his observations as follows. 1. The number of vibrations of the abdominal muscles in a state of half suspension can be distinctly counted, watch in hand. 2. Their number and sound are so like those of a very rapid fœtal heart that they may be mistaken for them.—*British Medical Journal.*

We learn from a recent exchange that the English government is offering iron hospitals to various unions throughout Ireland for the sums of £220 to £250 and £280, according as they are to contain twelve or twenty patients. They can be set up and made ready for occupation in a month, and are said to be, with water-closets, nurse-rooms, wash-rooms, &c., complete. If they be what they seem, these iron hospitals appear to solve the question of hospital construction, costing, we should suppose, furnished, not more than one hundred dollars a bed.—*Phil. Med. Times.*

The Connecticut River Valley Medical Association held its October meeting at Brattleboro' on Wednesday, the 29th ultimo. Typhoid fever, being the most prevalent disease in this locality during the fall months, afforded a large theme for discussion. Among the cases presented to the Society was one of interest, where the heart was found to be transposed to the right side of the sternum. This was the congenital condition of things. The Society paid the Vermont Insane Asylum a visit, and were much pleased with its arrangements. Resolutions on the death of Dixi Crosby were passed. The address of Vice President Dunham was received with favor, and voted to be published. E. H. Pettengill, *Sec.*

The death of the prize fighter, John C. Heenan, by phthisis will strengthen the general belief that it is an affection to which those of his calling are particularly liable. The popular theory is that it is due to the terrible pounding received on the chest during a fight. If it be true, as we think is the case, that prize fighters are more inclined to consumption than their equally dissipated associates, it nevertheless admits of another explanation. Though strong in muscle, these men, owing to the nature of their lives, have early impaired constitutions, and to such the very severe training to which they are subjected is doubly injurious.

Sayers, Heenan's last antagonist, died of the same disease.

NOTES AND QUERIES.

Who cuts gums? What does he do it for? Will any one give us his personal experience of its advantages over the let-alone system, if it has any, and oblige

Boston. Gum Lancet.

Married,—In Rockport, 5th ult., Dr. E. E. Barden to Miss Etta Gott, both of Rockport.

Mortality in Massachusetts.—*Deaths in fifteen Cities and Towns for the week ending November* 1, 1873.

Boston, 111—Charlestown, 13—Worcester, 16—Lowell, 19—Cambridge, 10—Salem, 5—Lawrence, 15—Springfield, 11—Lynn, 12—Taunton, 3—Newburyport, 4—Somerville, 6—Fall River, 22—Haverhill, 6—Holyoke, 7. Total, 260.

Prevalent Diseases.—Consumption, 54—typhoid fever, 24—scarlet fever, 19—pneumonia, 12.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, Nov. 8th, 157. Males, 83; females, 74. Accident, 9—apoplexy, 3—anæmia, 1—inflammation of the bowels, 2—bronchitis, 2—inflammation of the brain, 2—congestion of the brain, 1—disease of the brain, 6—cancer, 3—cholera infantum, 3—cyanosis, 1—consumption, 27—convulsions, 5—croup, 3—debility, 3—diarrhœa, 5—dropsy, 2—drowned, 1—diphtheria, 3—exhaustion, 1—erysipelas, 2—scarlet fever, 8—typhoid fever, 9—gastritis, 1—disease of the heart, 4—intemperance, 1—disease of the kidneys, 1—congestion of the lungs, 2—inflammation of the lungs, 5—marasmus, 2—old age, 10—orchitis, 1—paralysis, 5—puerperal disease, 3—pyæmia, 1—pleurisy, 2—premature birth, 1—peritonitis, 2—rheumatism, 1—stricture of urethra, 1—suicide, 1—tabes mesenterica, 1—tumor, 1—whooping cough, 1—unknown, 8.

Under 5 years of age, 52—between 5 and 20 years, 13—between 20 and 40 years, 38—between 40 and 60 years, 18—over 60 years, 36. Born in the United States, 104—Ireland, 31—other places, 22.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

ALLEGED DEATH FROM ETHER.

To the Editor of the British Medical Journal,

Sir,—Your issue of October 11th contains the following:—

"We have this week to make the sad announcement of a death from the inhalation of ether. It occurred at the South Hants Infirmary. We shall be glad of the comments of Dr. Morgan and our Boston contemporaries."

The avowed interest attaching to death from ether, compared with that attending the rather common occurrence of death from chloroform, attests its rarity; and those who have been long familiar with the safety and efficiency of the former may think it perhaps a little late to subject it in England to an experimental test which the comparative fatality of chloroform seems at length to have secured for it. I venture to comply with the invitation with which you have honored your Boston contemporaries, believing that until some anæsthetic shall be discovered equally safe, with less odor and less bulk, or perhaps some better form of anæsthesia than that by inhalation, ether must be considered on the whole our best anæsthetic. We need not here distinguish too nicely between anæsthesia, narcotism, and inebriation, when effected through the lungs. It is more important that special attention should be directed to several points connected with this subject which seem to be inadequately emphasized in contemporary European literature, especially asphyxia, pulse, and the real difference between what the journals somewhat promiscuously denominate "death from ether" and "death from chloroform."

The Massachusetts General Hospital numbers more than 15,000 cases of ether inhalation, 6,000 of which have been recorded within the last five years. The quantity of ether consumed during these five years has been about 2,800 pounds,—half a pound, more or less, to a patient; in one case four and a half pounds in twelve hours. It fell to my lot, in 1846, and for a year or two after the discovery of ether anæsthesia, as junior surgeon, to administer most of the ether in that institution; and having been personally cognizant of a large proportion of the cases of its administration there, down to the present time, besides those in my own practice, I have never been satisfied of the occurrence of a single death which could be attributed to any property of ether, apart from the gradual and progressive inebriating influence which it possesses in common with other anæsthetic agents.

A detailed report of a case involving so urgent symptoms and so prompt action as the one alluded to is obviously liable to inaccuracy, and the account should therefore be accepted with reservation, and rather as a good illustration of an emergency quite likely to recur in the experience of those who may believe, with a late English medical journal, that the less the air, during ether inhalation, the better the anæsthesia, or, with the French chemist, that nitrous oxide only asphyxiates. Nobody doubts that asphyxia produces insensibility. This is easily shown with a bag containing a few gallons of atmospheric air. But this insensibility, necessarily brief, is unattended by exhilaration. It is distressing, accompanied by lividity, by rigidity if pushed far enough, and is doubtless responsible for much of the dread which certain patients have of pulmonary inebriation.

The case in question is reported as follows:—

"David Newman, aged 14, a strumous lad, who had suffered from repeated attacks of corneïtis, was admitted an in-patient of the above institution on September 25th, 1873, under the care of Dr. Lake. On Wednesday, October 1st, he was brought into the operating room in order that iridectomy might be performed. When on the table, he exhibited considerable alarm, and required some persuasion before he was induced to lie down. Dr. Griffin having taken charge of the pulse, half an ounce of ether was poured on a sponge contained in a cone of spongio-piline, and the latter was closely applied to the mouth and nose. After a few minutes' inhalation, the ether being nearly exhausted, three drachms more were poured on the sponge. Shortly after commencing to inhale this second quantity, he began to struggle violently, getting at length into a state bordering on opisthotonos, his face becoming intensely scarlet. Dr. Griffin then announced that his pulse, which up to this time had been perfectly natural, had become very feeble. The ether was at once discontinued, when, the pulse having improved, Dr. Lake operated, no more ether being administered. At the close of the operation, which occupied only a few seconds in its performance, and before the eye could be bandaged, the pulse became imperceptible, the breathing was suspended, and the countenance livid. The tongue was drawn well out of the mouth, and held there; the calves of the legs were vigorously flagellated, and the chest freely slapped with a wet towel. The effect of these measures was to cause the patient to respire freely, to cry out lustily, and to kick about on the table; but this improvement did not last long,—probably about a minute. The pulse at the wrist did not return, and the breathing again stopped."

Artificial respiration, electricity, &c., were resorted to, but without effect, and the autopsy revealed nothing of importance.

In order to be clearly understood, let me here concisely re-state this account, as I interpret the phenomena.

A feeble boy was etherized. During this process, though only partially narcotized, he was very completely asphyxiated, and, when nearly dead, was operated on without efforts at resuscitation. When at last his absolute prostration awakened serious alarm, he was vigorously flogged with the view of restoring his exhausted strength; and under this active stimulus was excited to a final muscular effort which expended and extinguished his flickering vitality. I believe that such a death might have occurred without the ether.

Let us consider the circumstances in detail, and see whether or not they substantiate this hypothesis; and first, the apparatus employed for inhalation. This was calculated to produce asphyxia.

If the spongio-piline was covered, as usual, with rubber, no air could reach the patient, except in the interstice between the cone and the patient's face. But, according to the account, the cone was closely applied. If so, absolute asphyxia would ensue. It may seem superfluous to say that during the etherizing process a patient must live, as usual, upon oxygen. Let us even needlessly assert that without it a man must die. Ether will not save his life, if he is deprived of oxygen. It would not have saved Desdemona.

Asphyxia did ensue; but its symptoms passed unheeded. The patient struggled violently. Now a half-conscious struggle often results from mere muscular excitement, and is of little moment. But a rigid struggle, with opisthotonos, is very different. Such a spasm is connected with asphyxia, and may involve the muscles of the larynx. In this connection, let me remark that there is a wide distinction between the common and desirable snore of a relaxed and vibrating soft palate and a croupy stertor of the contracted laryngeal aperture. The latter is a part of that general rigidity of which opisthotonos is a manifestation, and by excluding air it indefinitely prolongs the asphyxia which occasions it. Air is its only remedy.

These appearances are familiar, in the practice of the Massachusetts General Hospital, even to the house pupils and ward tenders, to whom etherization is habitually entrusted. Lividity of the forehead indicates a probable similar color of the blood within the head, and announces that spasm may not be far off. Conversely, muscular spasm and laryngeal stertor direct attention to the color of the face. All these symptoms raise the question of admitting air promptly, and until the natural color returns. Indeed, it sometimes happens that because the muscles are rigid a patient seems imperfectly etherized, when the experimental admission of air relaxing the muscles proves the contrary. Even a half-conscious resistance, terminating in insensibility, often makes the patient a little livid; so that a struggle then suggests examination of his condition, and sometimes an interval and re-commencement.

If all this be true of inhalation with a sponge, through the meshes of which air has free access to the lungs, and which for hospital use, if not the most economical, is beyond comparison the simplest and safest ether inhaler, what were the chances of a slender boy, struggling desperately for breath, rigidly convulsed with opisthotonos, his face congested, his mouth and nose still sealed by an impervious cone forcibly and closely applied until the pulse gave way?

I unhesitatingly submit asphyxia as the primary cause of death, upon this report.

Notwithstanding this condition of the patient, he was operated on. With so complete asphyxia, it would in Boston be considered of the first importance, before operating, to re-establish respiration, pulse, and color; after which, more ether might be administered, to complete the anæsthesia. But in this case no such efforts were made, and no such interval was allowed. After a few seconds, which were occupied by the operation of iridectomy, the patient still livid from his struggle with the closely applied cone, "the pulse became imperceptible, the breathing was suspended," and in "about a minute" he was dead.

To this overwhelming effect of asphyxia upon a slender subject was doubtless added a certain amount of ether inebriation; but there is abundant evidence that this was but partial and incomplete. The quantity of ether administered was inconsiderable; and it is distinctly stated that the patient, when his legs were vigorously flagellated, and the chest freely slapped with a wet towel, "cried out lustily, and kicked about on the table," during the one minute he lived after the operation. Narcotism had not even reached insensibility to pain. No such imperfect ether anæsthesia can be held as principal in such a death.

It would be equally unphilosophical, in view of these facts, and in an endeavor to shift responsibility, to accuse the improbable shock of so slight a surgical operation, and still more any mysterious and as yet undiscovered property of ether, outside of that familiar, gradual, and comparatively innocuous influence which it possesses in common with other intoxicating agents. Further reference will be made to this.

A word about restoratives. The most effectual method of resuscitating a patient asphyxiated or over-dosed with ether is at once and quietly to get good air into his lungs. The volatile quality of both chloroform and ether makes their elimination from the pulmonary surfaces so easy, that, even when breathing seems to have ceased, a little thoracic movement, artificially assisted, generally enables the patient himself to reëstablish respiration and brings up the pulse. A feeble boy, who had exhausted his strength in a violent struggle for breath and life, would have no great stock in store to respond to a vigorous flagellation. In this respect he might differ from one who had gone tranquilly to sleep with opium.

In arraigning ether, let us not confound things. All powerful therapeutic agents and expedients may, under certain circumstances, contribute to depress the system—ether and chloroform among the rest; chloroform, as stronger than ether, possessing, of the two, the greater depressing influence. But this effect of a mere narcotism common to both, and which may contribute to the death of a feeble or dying patient, is not the real subject of discussion in the medical journals. The question is, has either of these agents, besides this gradual narcotic power, any additional, different, and peculiar quality, which renders it dangerous? To this I unhesitatingly reply, that chloroform has, and ether has not.

When we say "death from chloroform," we mean death by a shock or poison peculiar to chloroform, even when inhaled by a healthy person, under the most favorable circumstances, with abundance of air, and with every precaution; sometimes occurring at the beginning of anæsthesia undertaken for a trivial operation, almost as if by prussic acid; the sudden failure of a normal pulse indicating that the patient is beyond recovery.

With ether, I believe this to be simply impossible. It always acts slowly, never depressing the vital powers suddenly, or beyond recovery, without fair warning by the pulse in time to avert danger by the simple expedient of filling the lungs with unadulterated air.

In a somewhat extended paper upon anæsthetic agents, written in 1848 at the request of the American Medical Association, and published in the Transactions of that body, about one year and a half after Morton performed his first painless extraction of a tooth, and only a few months after Professor Simpson's first experiment with chloroform, the absolute necessity of air, the essential indication of the pulse, the difference between the snore of narcotism and the livid stertor of asphyxia, are all specified and insisted on. I may perhaps be pardoned for quoting, in conclusion, the following passage, which touches the main point of modern ether discussion.

"Ether does not prevent, nor is it to be considered responsible for, the ordinary collapse, resulting, in certain states of the system, after certain injuries and certain operations. The strong argument in behalf of ether is, that so few instances have occurred in which it could be even suspected of agency in fatal results.

"With chloroform the evidence is a little different. Two somewhat remarkable cases of death, occurring during the brief administration of this agent for surgical purposes, at once present themselves—the Cincinnati case, and that of Mr. Meggison at Winlaton. In these cases death occurred in about five minutes from the beginning of the inhalation. * * * * These instances suggest a specific cause of danger. This is the sudden impression upon the system of a powerful inebriating agent. Abundant alcoholic stimulus has often produced immediate death; and analogy would suggest that inebriating vapor in the lungs may be the equivalent of similar fluid in the stomach, and that in one or both of the cases alluded to, chloroform may have produced a sudden and overwhelming shock upon the system."* Your Obedient Servant,

HENRY J. BIGELOW.

NOTE.

The inodorous and transitory character of anæsthesia by nitrous oxide, notwithstanding its attendant asphyxia, may recommend it for the brief extraction of a tooth; and we should not ignore the fact that chloroform insensibility is, perhaps, as safe as many other experiences which people do not hesitate to encounter—crossing the Atlantic, for example—and yet one accustomed to the use of ether in surgical operations protracted during an hour or more, with an occasional examination or inquiry about the pulse, and a suggestion to admit air, if the medical student in attendance happens to forget it, is not a little impressed by the solicitous and apprehensive circumspection attending English anæsthesia.

Under these circumstances, a few purely practical suggestions, in a familiar form, however superfluous or even trite to a part of the surgical world, may perhaps not inappropriately serve as a record of the current views and practice of etherization in the hospital with which I am connected—which has, perhaps, a larger experience than any other, of this form of anæsthesia.

1. Accept the odor and bulk of ether as a cheap compromise for the safety of the patient and the confidence it gives the operator.

2. Believe that its anæsthetic effects, whether pleasant or objectionable, do not differ materially from those of chloroform.

3. Recognize the fact, that, while chloroform may kill without warning, ether never does.

4. Aim at anæsthesia by inebriation, not by asphyxia. With ether vapor, insure air to the patient. Though he struggle at the beginning, if he is not rigid or too livid, it is safe to compel inhalation; but if you can devote more time to the process, the resistance will be often less.

5. Use, and let hospital assistants use, a good-sized bell-shaped sponge; and then it may be a question of less rather than more air. The various forms of apparatus which restrict or graduate the quantity of air require more attention and more assistance. Of these a close bag is the worst. If the sponge is damp, it retains ether better, while the vapor is perhaps a little softer than when absolutely pure. The ready ignition of the latter suggests the precaution of moistening with water the skin and saturated linen, before employing near the face even galvano-cautery.

6. Keep the pulse in hand; at any rate, examine it often. When the pulse is right, the patient is so. With chloroform, the pulse may

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* Anæsthetic Agents, their Mode of Exhibition and Physiological Effects, by HENRY J. BIGELOW, M.D., one of the Surgeons of the Massachusetts General Hospital. Transactions of the American Medical Association. Vol. I. 1848.

be right and the patient wrong. If slow or feeble,* or if the patient snores more than he need, save his strength by giving air—at any rate, until the pulse comes up; but renew the ether before he is sensible of pain. If the pulse shows that he is suddenly faint, lay him down and give him air.

7. If the patient is livid or rigid, give him air.

8. If his glottis contracts, give him air.

9. If he breathes badly, put the finger inside the cheek to admit air over the base of the tongue.

10. Should he vomit, of which there is usually timely notice, give the matter free exit by turning the patient, if recumbent, well to one side. Although there is less nausea with an empty stomach, it is not well to starve a patient about to encounter a protracted operation.

11. From time to time evacuate the tracheal mucus from the fauces, during an expiration, with a sponge held in dressing forceps.

12. In operations about the nose and mouth, give, for convenience, a powerful dose before beginning. Impregnate the whole circulation to the degree it usually attains in the middle of a long operation. The patient is then easily kept quiet. Otherwise a volume of fresh blood may find its way to the brain, and suddenly revive him. Let the repeated dose be also heavy.

13. In these operations, expect blood in the trachea, and evacuate it like the mucus—but, by reason of its quantity, more promptly.

14. Indeed, if such an operation promises much blood, have a tracheotomy tube ready, with hooks to hold the incision open while they compress the veins, so that the tube can be entered by a cut or two in a few seconds.

15. Or insert the tube before the operation, and put a sponge in the pharynx. The patient may then be etherized through the tube. I have had occasion to resort to these expedients.

16. In artificial respiration, act with the patient, and not against him. He will not cease to breathe at once, and wholly. Enjoin silence; watch the first attempt at inspiration, and at the expiration compress the thorax, aiding its elastic reaction, if absolutely necessary, by Sylvester's, or other quiet method. See that the tongue is well forward.

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* "Here is the precaution against danger; . . . . this sign is *the diminution of the force and frequency of the pulse.*

"In an early case of the administration of ether by Dr. Morton, and which has been reported, the danger from over narcotism was quite as imminent as in any case I have since seen alluded to. As a bystander, on that occasion, I casually felt the pulse, and found it barely distinguishable; and though it subsequently still decreased, the means at once adopted for the restoration of the patient proved ultimately successful. This occurrence pointed to the pulse as an index of the stage of narcotism; a few subsequent experiments confirmed the belief; and I have not since hesitated to push etherism to complete insensibility, and to continue it, if necessary, during a length of time, provided the pulse remained full and strong. If it be retarded by ether, it is curious to observe with what certainty it recovers force and frequency, after a few inspirations of pure air. It will be inferred from these remarks that the pulse is to be carefully examined during the whole anæsthetic process, and that inhalation is to be temporarily discontinued at its indication." —*Anæsthetic Agents, &c.*, 1848.

17. Do not cool the patient by exposure and wet surroundings.

18. Being first assured that he can swallow a teaspoonful of water, feed him, if you like, with stimulus, during the expiration, but not the inspiration.

19. Give to all painful surgery, without exception, the benefit of anæsthesia; but a patient unequivocally exhausted by long disease—of the bladder, or of a joint, for example—or an habitual inebriate, may require care; without which, protracted narcotism may gradually depress his pulse beyond the rallying point. On the other hand, a healthy laborer, who reaches the hospital some hours after a railroad accident, cold, and literally pulseless at the wrist, from hæmorrhage and exposure, is, as a rule, stimulated by the ether, during and after at least one amputation.

20. Notwithstanding every expedient, there is occasionally an untoward subject who is habitually tetanic or livid, whenever etherized; or, more rarely, one whose respiration is notably intermittent before he becomes insensible. The latter requires attention. In children, it may be added, anæsthesia is cumulative.

Such are some of the minor considerations and prompt precautions which collectively determine the question of life or death in the exceptional emergencies of anæsthesia by ether. Many of them apply with equal force to chloroform; but against the shock of chloroform and its sequences, whether "chloroformic syncope," "cerebral anæmia," or "cerebral congestion," precaution avails nothing.

SUCCESSFUL REMOVAL OF THE SPLEEN.—In the *Raccoglitore Medico*, Dr. Sonsino gives an account of a case in which, on June 20th, Dr. Attillio Urbinato, of Cesino, removed a hypertrophied and mobile spleen. The incision was made in the middle line, and prolonged above the umbilicus, being at least seven inches in length. The operation was performed without much difficulty. After tying three small cutaneous arteries, opening the peritoneum, and drawing aside some loops of intestine, the spleen was seen, free from all abnormal adhesions, and of enormous size. At the inferior part was seen the gastro-splenic epiploon, which was adherent; and the vessels here were extremely dilated. At the upper part was seen the lower portion of the pancreas. The epiploon was detached, and the vessels tied. The ligatures, seven in number, were left inside without further precaution. The few adhesions of the pancreas were overcome without difficulty, simply by means of the finger. The largest vessels, and the connective tissue which surrounded them, were secured by a metallic loop and hempen ligature. The "toilette" of the abdominal cavity was made with great care. The patient lost but little blood. The ligatures of the vessels tied were passed out between the sutures, of which there were five deep and five superficial. The spleen weighed two and a half pounds. The operation lasted an hour; the patient bore the chloroform well, and subsequently appeared to be progressing favorably, but died of peritonitis three days after the operation.—*British Medical Journal.*

Progress in Medicine.

REPORT ON DISEASES OF THE THROAT.

By F. I. KNIGHT, M.D.

IN GENERAL.

(1.) Aphonia. ANDREW H. SMITH, M.D. Philadelphia Med. Times, Oct. 4, 1873.

(2.) Notes on a solution of iodoform. LEWIS ELSBERG, M.D., Professor of Laryngology, &c.

(3.) Der Kehlkopf oder die Erkenntniss und Behandlung des Menschlichen Stimm-organs im gesunden und erkrankten Zustande. MERKEL. Illustrirte Gesundheitsbücher. Leipsig. 1873.

(2.) Dr. Elsberg says that a great objection to the employment of iodoform ($C_2 H I_3$) in substance is its bad odor, which is very penetrating and persistent; furthermore, there has not been in use any effective solution for topical application in cases where ointments are inapplicable. Rhighini used an ethereal solution for direct inhalation, and Dr. Sass used an ethereal solution, and also a mixture of iodoform and sweet almond oil by means of a spray producer for inhalation. Dr. Gubler requested Messrs. Odin and Leymarie to ascertain the relative proportions in which iodoform is soluble in ether, and the most favorable conditions for its preparation; their experiments and conclusions are published in the *Pharmaceutical Journal*, Aug. 2, 1873. The *London Doctor* for Sept. 1st tells us that experiments were made with pure ether of 65° Baumè (specific gravity .724), and also with ether of 62° Baumè, and 56° Baumè, the temperature being 13° C. Eight grains of tincture obtained with these ethers contained iodoform in solution, respectively, to the following extent:—

Ether of	65°	Baumè	1.61	grammes.
"	62°	"	1.26	"
"	56°	"	1.13	"

Their conclusions are,

1. To employ iodoform in the crystalline state.
2. To make the solution in a *red* glass flask by simple agitation.
3. To use the following proportions:—

Crystallized iodoform, 1 gramme;
Ether (60° Baumè) 4 grammes.

Dr. Elsberg had a solution prepared with Squibb's ether, and finds that it possesses all the advantages of iodoform in powder for local application, without its disadvantages. The solution smells only of ether, and the smarting produced on the mucous membrane is so momentary that the application is really painless. It may be applied to the mucous membrane of the throat, nose, mouth, larynx, vagina, rectum, &c. Its beneficial effects surpass Dr. Elsberg's expectations.

NARES.

(1.) On Fibrous Polypus of the Nose, with particulars of a case and operation. GEORGE LICHTENBERG, M.D., Surgeon to the German Hospital, &c. Lancet, Nov. 30, 1873. [The operation was one of Langenbeck's, viz., by displacing the nasal bone, and the nasal process of the maxillary bone.]

(2.) Cure of a Naso-pharyngeal Polypus, by galvano-cautery. CINISELLI. Il Raccoglitore Medico, Jan. 10, 1873. Allg. Med. Central-Zeitung, Feb. 22, 1873.

(3.) An improved Method of plugging the Posterior Nares. A. GODRICH. British Med. Journal, April 12, 1873

(4.) MAGNUS. Der Nasenrachenraum; eine Studie am Lebenden gemacht. Archiv f. Ohrenheilk. vi. 4, p. 246 (Schmidt's).

(5.) SCHULZE. Ein Beitrag zur Technik der Nasendusche. Arch. f. Ohrenheilk. vi. 4, p. 263.

(6.) MORIN. Compression der Arteria Facialis bei Nasenbluten. (Revue de Thérap. Med. et Chirurg. 1873.) Allg. Med. Central-Zeitung, June 14, 1873.

(2.) Ciniselli's case, reported as one of naso-pharyngeal polypus, cured by galvano-caustic, seems to have been one in which the treatment may be considered to have been electrolytic as much as in the case of Bruns. The tumor occupied the whole wall of the pharynx, completely stopping up the left nostril and partially the right, posteriorly. It extended deep down in the pharynx, and pushed the epiglottis against the base of the tongue. Its point of origin could not be determined. As it was not admissible to subject the much emaciated anæmic patient to a bloody operation, Ciniselli decided to apply "galvano-caustic." On November 20, 1869, treatment was commenced with a small Grenet's battery, of eight elements. The steel electrodes were twelve centimetres long, and covered with caoutchouc to within two and a half centimetres of the end. The needle of the negative pole (zinc) was introduced into the polyp through the left nostril, the other through the mouth into the right side of the tumor. The electric current was passed through the tumor for fourteen minutes. On the 29th of November, an eschar came away from the throat, and a brownish yellow fluid, mixed with shreds of dead cellular tissue, began to flow from the left nostril. On the 8th of December, respiration and deglutition were already easier. The treatment was continued every twenty days till October, 1871, when the tumor was so much diminished in size that only an insignificant "bony" (knöcherne) prominence was to be seen on the posterior inferior wall of the pharynx.

FAUCES.

(1.) COOK, A.B. Adhesion of the Soft Palate and Uvula with the posterior Wall of the Pharynx. Operation. Cure. Philadelphia Med. and Surg. Reporter, xxviii. 10, p. 203. March.

(2.) DEPRES. Retropharyngeal abscess; adenitis retropharyngealis. (Gaz. des Hôpitaux, No. 32.) Schmidt's Jahrb.

(3.) On Enlargement of the Tonsils as a cause of Nightmare. HAWARD. Brit. Med. Journal, June 7, 1873.

GROWTHS.

(1.) On the Results of Thyrotomy for the Removal of Growths from the Larynx. MORELL MACKENZIE. British Medical Journal, April 26th, and May 3d, 1873.

(2.) Eine neue Methode zur Ausrottung von Kehlkopfpolypen. VON DR. JELENFFY in Pest. Wiener Med. Woch., Nos. 11, 12 and 13. Jahrgang 23.

(3.) Critique on Jelenffy's method, &c. Wien. Med. Presse, No. 3, 1873.

(4.) Reply from DR. JELENFFY. Wien. Med. Presse, No. 6, 1873.

(5.) Exhibition of Specimen of Epithelioma of the Tongue and Larynx. BAGSHAWE. Med. Times and Gazette, June 14, 1873.

(6.) Soft Tumors of the Larynx. Dr. EMILE NICOLAS DURANTY. Lancet, Jan. 4, 1873.

(7.) Abstract of Lecture on Disease of the Neck with Dyspnœa, necessitating Tracheotomy: probable Cancerous nature of the Disease. DE MORGAN. Brit. Med. Journal, May 17, 1873.

(8.) Die Sogenuante Kehlkopfsguillotine. BRUNS. Wiener Med. Presse, May 11, 1873.

(9.) EMELE, CARL. (*a*) Hochgradige Stenose der untern Larynxhälfte; (*b*) Aphonie durch einen Kehlkopfpolypen bedingt. (Sitzungs-Bericht des Vereins der Aerzte in Steiermark, ix. p. 5, 1872.) Schmidt's Jahrb., June 23, 1873.

(10.) Zur electrolytischen Behandlung der Nasen-Rachenpolypen. P. BRUNS. Berliner Klin. Woch., Aug. 11, 1873.

(11.) Du Traitement des Polypes Laryngiens. CHARLES LIVON. Paris. 1873.

(12.) On Section of the Laryngeal Cartilages for the Removal of Morbid Growths. DURHAM. Med.-Chir. Trans., 2d series, vol. 37, 1872.

(1.) Dr. MACKENZIE's article is a thorough and exhaustive reply to a paper by Mr. Arthur Durham in the current volume of the *Medico-Chirurgical Transactions*, "On Section of the Laryngeal Cartilages for the Removal of Morbid Growths." The summary of results, according to Mackenzie, reduced to percentages and placed in a tabular form, is as follows:—

	Per ct. on 48 cases.
Complete success,*	14.58
Partial "	22.91
Death,	8.33
Severe dyspnœa, requiring use of canula,	31.25
Severe dyspnœa, requiring fresh operation,	8.33
	Per ct. on 45 cases.
Aphonia,	40.0
Dysphonia,	20.0
Modified voice,	11.11
Not stated, but probably defective voice,	6.66
	Percentage based on 39 benign cases.
Recurrence, or incomplete removal,	38.46

These results differ considerably from the percentages derived from 37 cases, which Mr. Durham introduced into his article, but space will not allow us to give Dr. Mackenzie's reasons for classifying many of the same cases differently (for Dr. M.'s list includes all those of Mr. Durham), but those who are interested are referred to his paper.

Dr. Mackenzie closes his paper by saying that, as a result of his own experience and from the investigations he has made into the subject, he ventures to submit the following propositions:—

First, That the operation ought never to be performed for loss of voice alone.

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* Complete success is understood to mean recovery of perfect voice and perfect respiration, and absence of recurrence of growth; partial success to mean recovery of one function, with injury to another, or temporary recovery of both functions, with subsequent recurrence of the growth.

Second, That in cases of cancer the operation is useless, except where the growth is very small and distinctly circumscribed.

Third, That the operation should be confined to those cases in which there is danger to life from suffocation or dysphagia, and then only to be performed after an experienced laryngoscopist has pronounced it impossible to remove the growth *per vias naturales.*

(10.) In our report published in this JOURNAL, November, 1872, we gave full particulars of a case of naso-pharyngeal polypus cured by Dr. Bruns by means of electrolysis, after very long treatment. Dr. Bruns now communicates a case in which a very large naso-pharyngeal polypus was cured by him in eleven applications of the electric current. Dr. B. publishes this case now partly to show that the treatment by electrolysis need not always be so prolonged as in his first case, which may have deterred others from trying it. The patient was a man of thirty years of age, who had had symptoms of the growth for fourteen years, and had undergone several ineffectual operations for removal.

On examination, a fibrous polypus was found filling the vault of the pharynx, attached on the right, reaching as low as the base of the uvula, covering the openings of the nares posteriorly, but not projecting into them. Besides this, the right nostril was filled with a number of mucous polypi. The treatment was continued from the 12th of March to the 7th of April.

Before treatment by electrolysis was commenced, a part of the mucous polypi were removed from the right nostril to facilitate the introduction of one of the electrodes. The battery used for obtaining the constant current was Frommhold's, of thirty-two elements. As electrodes at both poles, strong zinc needles were used, one being introduced into the tumor through the nostril, and the other through the mouth. The needle which was introduced through the nostril was covered with an Eustachian catheter of hard rubber. Nine applications were made in this way, both needle electrodes being inserted into the tumor. The number of elements included was six. On each attempt to increase the strength of the current the patient expressed pain. The circuit was closed with only one element and the number gradually increased, and in the same manner the number of elements was gradually diminished, in order to diminish the shock of opening and closing as much as possible. The length of the sittings was, usually, from fifteen to twenty-five minutes. The two other applications were made with the positive electrode covered with sponge held in the hand or upon the sternum. In these, the number of elements included was from ten to twenty, and the length of the sitting was thirty minutes.

The three first sittings occurred from the 12th to the 14th of March. During the succeeding four days, there was a profuse discharge of pus and mucus, and small particles of the tumor. Rhinoscopic examination showed the inferior surface of the tumor ulcerated and gangrenous, besides a considerable shrinking of it. The next three sittings occurred from the 19th to the 21st of March. Then there was a suspension of the treatment for ten days, on account of an attack of angina. After this, rhinoscopic examination showed that the tumor had diminished in size by one half. The seventh to the eleventh sitting occurred from the 1st to the 7th of April. During this time, there was a rapid diminution of the tumor in size. At the end of this time, treatment was suspended on account of the temporary absence of Dr. B., and the patient went home. On his return, four weeks after, none of the tumor remained, only a cicatrix at the place of insertion.

DIPHTHERIA AND CROUP.

(1.) C. J. EBERTH. Die Diphtheritischen Processe. Centralbl. für die Med. Wissensch, No. 8, 1873. Allg. Med. Central-Zeitung, Feb. 19, 1873.

(2.) LETZERICH. Kritische Bemerkungen über die verschiedenen Methoden zur Heilung der Diphtherie.

(3.) LETZERICH. Statistische Uebersicht der vom Jahre, 1868, an bis Ende 1872 in seinen verschiedenen Wohuozten behandelten Diphtheriekranken mit Angahe der Gestorbenen.

(4.) KUHN. Ueber innere Behandlung der Diphtheritis. Berl. Klin. Woch., Feb. 10, 1873.

(5.) HENRY REYNOLDS. Successful local treatment of Diphtheria. (E. Wilton, Me.) [Carbolic acid and glycerin p. æ.] Medical News, Dec., 1872.

(6.) WELSCH, jun. Iod als Mittel gegen Croup. [Aerzt. Int. Blat., No. 12, 1873.] Allg. Med. Central Zeitung, April 16, 1873.

(7.) RAPP, jun. Brom inhalationen und Bepinselungen gegen Croup. (Bayer, Arztl. Intell Bl. xx. 4) Schmidt's Jahrb., June 23.

(8.) BOHM. Iod als Mittel gegen Croup, Allg. Med, Central-Zeitung, May 28, 1873.

(9.) Ueber gewisse ätiologische Beziehungen der Diphtheritis zu anderen Krankenheiten, Zum Sande. Berl. Klin. Woch., July 7, 1873.

(10.) BINDER. Die Diphtheritis in Siebenbürgen, speziell in Agnetheln. Wiener Med. Woch., Aug. 16, 1873.

(11.) Dr. JOHN BARTLETT. Lime Baths in membranous Croup. Chicago Med. Examiner, Aug. 15. (Phil. Med. Times, Sept. 20, 1873.)

13. Des Complications Cardiaques du Croup et de la Diphtherie, et en particulier de l'endocardite secondaire diphtheritique. Par Le Dr. Labadie Lagrave. Paris. 1873.

TRACHEOTOMY AND LARYNGOTOMY.

(1.) MAUNDER. Cases of Laryngotomy. British Medical Journal, Feb. 1, 1873.

(2.) Tracheotomy performed by Galvano-caustic Apparatus. La France Médicale, Jan. 22, 1873. Practitioner, March, 1873.

(3.) MACKENZIE, SEMPLE and THORNTON. Eight cases of Tracheotomy. Med. Times and Gazette, June 7, 1873.

(4.) SCHECH. Ueber die Functionen der Nerven und Muskeln des Kohlkopfs. Berl. Klin. Woch., May 19, 1873.

(5.) DURHAM. On the Operation of Opening the Larynx by Section of the Cartilages, &c., for the removal of morbid growths. Med. Chir. Trans., 2d series, Vol. 37, 1872.

(6.) BOURDON. Tracheotomy by Galvano-caustic. Archiv. Gén. 6 Ser. xxi. p. 53. Jan. (Schmidt's).

(7.) B. W. RICHARDSON. On Artificial Respiration after the Operation of Tracheotomy. Med. Times and Gazette, Aug. 2, 1873.

(8.) DE RANSE. Nouveau procédé de Laryngotomie. Gazette Méd. de Paris, July 5, 1873.

(1.) Mr. Maunder reports three cases under this heading, which occurred at the London Hospital. The first was one of naso-pharyngeal polypus, in which the breathing became so bad after an attempt at removal by the *écraseur,* that *tracheotomy* (the word used in the detailed report) was performed, and afterwards the growth was removed by slitting the soft palate, and perforating and cutting away sufficient of the hard to allow plenty of space. He then removed the growth by freely scraping bare all the bony surfaces from which it took its origin. The tumor was fibrous, and took its main origin from the basilar process of the occipital bone. Mr. Maunder remarked that these growths sprang from the periosteum, and, to remove them effectually, it was necessary to scrape off this completely. After the operation, the wound in the hard and soft palate was to be left open for some time, to examine the part readily, and to destroy, if necessary, with the galvanic cautery, any fresh growth.

The second case was one of syphilitic disease of the pharynx, in a syphilitic man, aged 30, who had had for several days severe attacks of dyspnœa. The soft palate and uvula were found to be united to the base of the tongue, completely closing up the fauces, with the exception of one small hole on the right side of the uvula, which admitted a No. 4 catheter. He said that he could eat meat after masticating it well, and seemed to make light of any great difficulty in swallowing. Laryngotomy was performed, and attempts were then regularly made to dilate the aperture above described by passing catheters and bougies, but the largest that could be passed was a No. 11 catheter. He could eat chop and vegetables without apparent difficulty. Mr. Maunder then enlarged the aperture by making an incision through it parallel with the uvula, and then forcibly dilating with his finger. The whole of the pharynx appeared to be filled up with diseased tissue. Five days afterwards, he had an attack of erysipelas of the face, which disappeared in twelve days. Mr. Maunder proposed still further to dilate the aperture in the pharynx by passing bougies at intervals, and, if necessary, by making incisions at right angles to the present opening.

The third case was one of inflammation of the floor of the mouth, tongue, pharynx, and left side of the neck, in a man of 21, who, on admission, attributed the swelling, redness, &c. of the above-named parts to a fight which he had had four days before. Two days after admission, the floor of the mouth was so much swollen that it reached about the level of the teeth, and was indented by them. The tongue so filled the mouth that the back of the mouth or fauces could not be seen. He could swallow nothing. He breathed moderately well. An incision into the side of the neck gave vent to a little pus. Dressing forceps were introduced into the wound, and through the deep fascia and withdrawn open. On the following evening, his breathing became rather worse; and, at 2, A.M., his condition was so urgent that the house surgeon performed laryngotomy. The neck was so much swollen and so brawny that the thyroid cartilage could not be felt; and after cutting through thickened and infiltrated tissue for more than an inch, the larynx was found to be pushed very much to the right of the median line. The operation afforded instantaneous relief. The swelling of the mouth, tongue and neck had so subsided two days after this operation that the fauces could readily be seen. In six days the tube was removed, and the patient was rapidly recovering.

(2.) This proceeding was originally introduced into practice by M. Amussat fils, in 1870, and was first performed on a boy, aged 13. Dr. Amussat passed a curved needle, carrying a double thread of platinum, through the integuments, so as to embrace at the same time about two centimetres of the trachea in the loop. After the removal of the needle, he seized one of the threads with two forceps in communication with an electric battery, and made the section of the tissues comprised in the loop without hæmorrhage. The trachea being opened, the child coughed violently, and expelled the foreign body which was in the trachea, and for which the operation had been performed. A week subsequently, the wound was healed and the patient well.

The first number of the *Archives Générales de Médecine* for 1873 contains a series of eight operations by different operators, the particulars being furnished by M. Bourdon.

The operation as performed by M. Verneuil is as follows: There are three steps; the incision of the skin and of the soft parts; the incision into the trachea, and the introduction of the canula. 1st. After having marked with the nail the point which corresponds to the inferior border of the cricoid cartilage, the extremity of the blade of the instrument is pressed in and made to cut downwards to an extent corresponding to the diameter of the canula that is desired to be introduced, and the thickness of the soft parts covering the trachea. In the infant, the first incision, which is made with great rapidity, ought not to be made deeper than the skin, lest the trachea should be opened at the outset, and there be a risk of cauterizing it, if not of perforating the posterior wall. 2d. The trachea being exposed, it should be seen that the wound corresponds to the middle line, and the point of the knife should be made to penetrate into the first interspace between the cartilages and the necessary number of rings divided. 3d. The introduction of the canula is the last and easiest of all. This proceeding, it is obvious, differs considerably from that of M. Amussat, but in view of the difficulties that are presented by the adult when tracheotomy is required, M. Bourdon prefers the latter.

Foreign Bodies.

(1.) Laboulbene. Foreign Bodies in the Larynx. Bulletin de Thérapeutique. Lancet, Nov. 16, 1872.

(2.) Trendeblenburg. Zur Extraction von Fremdkörpern aus dem Œsophagus. Langenbeck's Archiv, Band. xiv. Heft iii. Berliner Klinische Wochenschrift, Feb. 24, 1873.

(3.) Chevalier. Corps étranger dans le pharynx; abces rétropharyngean; congestion pulmonaire (?); mort. Archiv. Méd. Belges. Gazette Médicale de Paris, Mar. 8, 1873.

(4.) Landi. Corps étrangers dans la trachée; tracheotomie. Lo Sperimentale, 1872. Gazette Médicale de Paris, Jan. 25, 1873.

(5.) Cohen. Bone removed from the Larynx (post mortem). Phil. Med. Times, June 7, 1873.

(6.) Annandale. Foreign Bodies in the Larynx; appearance of Croup. Edinburgh Med. Journ., xviii. p. 849, March.

(7.) Donlos. Leech in the Pharynx ten days. Bull. de Thérapie, lxxxiv. p. 236, March. Schmidt's Jahrb., June 23.

Trachea.

(1.) Plugging the Trachea in Operations on the Mouth and Throat. British Medical Journal, May 24, 1873.

(2.) D. S. Lamb, M.D., Act. Assist. Surgeon U. S. A. A Fatal Case of Congenital Tracheo-œsophageal Fistula. Philadelphia Medical Times, Aug. 9, 1873.

(2.) Dr. Lamb reports a very interesting case of tracheo-œsophageal fistula; he has not been able to find any case recorded which was exactly like it, those cases which have been recorded being conjoined with other malformation of the œsophagus, as, for instance, cul de sac termination. The patient in his case was seven weeks old at death, March 31, 1873. From its birth, almost every attempt at nursing was attended with strangling, and sometimes with lividity of skin. The mother stated that, during a portion of the previous summer, she had been roughly treated by her husband while he was intoxicated; on several occasions he had violently choked her. Dr. Lamb saw the child for the first time about sixty hours before death. The most prominent symptom was flatulence, which was abundant and very painful; no vomiting; several thin greenish stools daily; it nursed but little. At the autopsy, a small granular deposit was found upon the mucous membrane of the trachea, just below the fistulous opening; it was suspected to be from a milk-clot, but was washed off and lost before its composition could be made out with certainty. The right lung was very dark and hepatized throughout; there was also slight pleuritic adhesion between the upper and middle lobes; no fluid or lymph in the cavity. The left lung was somewhat emphysematous in its upper lobe; the anterior lower margin, to the extent of about a square inch, was in the same condition as the right lung; there was neither fluid, lymph nor adhesion in the left pleura. Heart normal. Stomach and intestines distended with flatus. Liver, spleen and kidneys normal. Mesentery somewhat congested.

The head was not examined, except so far as to notice the condition of the palate, which was found normal. The hyoid bone, larynx and portions of the trachea and œsophagus were removed. In the median line, nearly half an inch below the lower border of the cricoid cartilage, was a fistulous communication between the tubes, having a longitudinal diameter of three lines and a transverse diameter of one line; the direction of the fistula was downwards and backwards, the opening in the œsophagus being at a lower level than that in the trachea; the edges were smooth and rounded, and the mucous membrane normal.

This specimen is now in the Army Medical Museum, No. 1161 of the medical section. Dr. Lamb concludes his paper with abstracts of the descriptions of the cul de sac pharynx or œsophagus, with or without fistulous communications with the air-passages, found in various museum catalogues. He calls attention to the similarity in the cause of death in several of the cases. The two cases from which were obtained specimens 456 and 457 of the Boston Society for Medical Improvement appear to have terminated fatally from *pneumonia*, as did the case reported by him.

Dr. L. also remarks that it seems to be quite possible for fluids to find their way into the trachea of an infant, even without any obstruction of the œsophagus. He quotes from the *Lancet* of May 10th, 1873, the case of a child aged " one year, which was fed by the bottle, put to bed at six o'clock, and died at midnight with all the signs of intense dyspnœa. At the post-mortem examination (ten hours after death), the two lower lobes of the lungs were found quite softened, grayish, having a smell of butter, and, in a word, having undergone the action of gastric juice. Altered milk was found in the trachea and bronchi. In this case, the milk contained in the stomach, which doubtless had been taken in excess, was vomited, and, on account of the horizontal posture, had penetrated into the air-passages. Dr. Panot drew the attention of his colleagues to the importance of the fact from a medico-legal point of view. He thinks that this occurrence must be rather frequent, as he has already witnessed two cases in his own sphere of observation."

Œsophagus.

(1.) Emminghaus. Einiges über Diagnostik und Therapie mit der Schlundsonde. Deutsches Archiv für Klinische Medicin, xi. Band, iii. Heft.

(2.) Francis Mason. Carcinoma Œsophagi; Gastrotomy; Death. Lancet, Jan. 25th, 1873.

(3.) Totherick and Jackson. Impassable Stricture of the Œsophagus; Gastrotomy; Death. Brit. Med. Journal, May 24, 1873.

(4.) Heyfelder, O. Krebsige Striktur des Œsophagus, Ernärung durch die Schlundsonde und Fleisch-Pankreas-Klystir. Deutsche Ztschr. f. Chir. ii. 3, p. 324. Schmidt's Jahrb.

(5.) Weichselbaum. Strictura Œsophagi; Œsophagotomie; Death. (Von Podrazki's Klinik.) Wien. Med., Aug. 16, 1873.

Œsophagotomy.

(1.) Tillaux. Œsophagotomy. Bull de Thér., lxxxiv. p. 14, Jan. 15. Schmidt's.

Instruments.

(1.) Dobell's Tongue Spatula. Brit. Med. Journal, March 1, p. 228. Schmidt's.

(2.) Welsch. Ueber Anwendung von Hohlspiegeln als Kehlkopfspiegel. Deutsche Klinik, 14.

(3.) An improved Tonsillotome. (Said to have been suggested by Dr. J. S. Billings, U. S. A.) Phil. Medical Times, June 28, 1873. [Seems to be identical with the tonsillotome made by Mayer and Metzer, of London.]

(4.) Boeker. Ein Handgriff zur Anwendung des Galvanokaustik innerhalb des Kehlkopfs. Berliner Klin. Woch., July 28, 1873.

Laryngitis.

(1.) Gerhardt. Chorditis vocalis inferior hypertrophica. Deutsches Archiv, Bd. ii. Heft. 7, p. 583.

(2.) James Sawyer, M.B., Birmingham. On the Treatment of Chronic Inflammatory Diseases of the Larynx. Brit. Med. Journal, July 12, 1873.

[To be concluded.]

A Definition of Life.—The *Medical and Surgical Reporter* offers the following, which it states is "substantially, though not verbally, propounded by perhaps the profoundest living zoölogist of this century, Cuvier, in his Animal Kingdom (vol. ii. p. 71):—'Life is that condition of being in which the form is more essential than the matter.'"

Reports of Medical Societies.

MIDDLESEX SOUTH DISTRICT MEDICAL SOCIETY. C. E. VAUGHAN, M.D., SEC.

The semi-annual meeting was held at North Cambridge, October 15th, 1873, Dr. Morrill Wyman presiding.

Dr. Wellington read an interesting paper upon "Peri-Uterine Hæmatocele." A discussion followed upon a question raised by Dr. Hosmer, as to the origin of the acute pain in these cases.

Dr. Wyman said that, in extra-uterine fœtation, the placenta is often attached to the peritoneum, which assumes the functions of the uterine surface.

Dr. Wellington cited Dr. Garland's case, reported in the Boston Medical and Surgical Journal of July last, where the placenta was probably planted on the outside of the uterus.

The President related the case of a drover, who was taken in the country with acute abdominal pain, and came to him on his way to Brighton. There was tenderness in the right iliac region, quick pulse, &c. He went to Brighton contrary to advice. The next day, very severe abdominal pain came on, and the man sank and died in eight or ten hours.

The autopsy showed a perforation of intestine, with purulent secretion enclosed and protected by adhesions. In the second attack, the adhesions had broken down, and there were evidences of beginning peritonitis. The system tolerated a small effusion, but succumbed to a more extensive one, which occurred rather from what we call shock, than from peritonitis.

Two months since, Dr. Hosmer was called to a patient in advanced stage of phthisis of the lungs. He found, besides the usual signs of phthisis, abnormal resonance at base of lung, and, at base and behind, strongly marked amphoric breathing. There was acute pain in the right side, and dyspnœa, and, of course, rupture of the pleura.

Dr. Wyman spoke of a man in a late stage of pulmonary tuberculosis. He was sent for in haste. He found the chest resonant, and an undoubted perforation of the pleura. Not much pain. The patient began to improve from that time. The cough nearly disappeared, and the man went back to wood sawing, and lived at least a year after the occurrence.

Query. Was the tubercular affection, in accordance with the views of the later German school, local, or general and constitutional, according to the English school? It looks as if the former were the case.

Dr. Webber, of Cambridge, mentioned a recent case of labor, with the head presenting, preceded by an arm and the funis; pelvis roomy and os dilated. He succeeded in reducing the arm and funis, after placing the patient upon her hands and knees, with her head low.

Dr. Nichols related a case of rupture of the uterus in a tenth pregnancy. Pains began at noon, and were very severe until 4, P.M., when the rupture occurred. Seen at 5½; no apparent shock then; pulse good. A knuckle of intestine was first felt in the vagina; the feet were reached above the brim of the pelvis before the diagnosis was made. Dr. N. was struck by the ease with which the parts of the child could be made out through the abdominal walls. After delivery, a large rent was found some distance above the os. Patient sank slowly, and died twenty-three hours after the accident.

Dr. Warren, of Waltham, mentioned a case which occurred some years since. The pains were very severe, and the os dilated slowly. After a violent pain, the fœtus was found partly expelled through a large rent just above the os; the placenta soon followed through the same aperture, and the woman made a good recovery. She was confined again, fourteen months later. On examination, a rent was found just above the os uteri, the cervix forming a band between the rent and the os, against which the head bore down strongly with each pain. The band was divided with scissors, and the child was born in half an hour. Woman again made a good recovery.

Dr. Warren said that, at the Isle of Shoals the past summer, he met several victims of autumnal catarrh. All said that they had not suffered as much this year as usual.

Dr. Wyman said that, in Cambridge, several were attacked later and more mildly than usual, but that one, at least, in Boston, had suffered more than usual. In some cases this year, quinine seemed to afford unusual relief. The disease is attributed by some to vegetation. Is the difference in different years owing to the greater abundance of some particular plants?

In answer to inquiries, the President spoke of the recent meeting of the British Medical Association, which he attended. The meeting, which lasted five days, was attended by 1200 or 1500 members. A large number of papers were read. The ether question was fully discussed. A variety of inhaling apparatus was exhibited, and as each inventor expressed perfect confidence in the safety of ether with his particular apparatus, the evidence in favor of ether was pretty strong.

While abroad, Dr. Wyman examined the London sewerage system, and gave a clear and interesting description of the same and its practical working, by which all the sewage is fully diluted and carried to a point upon the river, twelve miles below the city. He argued that some such system must at some future time be adopted here.

He referred also to the excellent paper by Dr. Bowditch, in the Second Report of the Massachusetts State Board of Health.

Gangrene of the Lungs in Children. By Louisa Atkins. London. —The authoress gives, in this article, a resumé of what was to be found in the literature of the above disease in children, adding four cases obtained from Prof. Wyss. Of sixty-five recorded cases, the history of only thirty could be made use of, the data of the others being too imperfect. The following are given as the local causes:—

1. On the side of the vessels: (1) Compression of the smaller vessels from severe inflammatory processes in the lungs, or thrombosis caused by stagnation of the blood as a result of prolonged and severe inflammation (traumatic pneumonia), croupous and catarrhal pneumonia (after measles, &c).

2. On the side of the bronchi: (1) Absorption of putrid matter from the bronchi after noma, gangrene of the pharynx, larynx (gangrene after variola, scarlatina, measles, &c).

Bibliographical Notices.

Lehrbuch der Geburtshülfe mit Einschluss der Pathologie der Schwangerschaft und des Wochenbettes. Von Dr. Karl Schrœder. Mit 26 in den Text gedruckten Holzschnitten. Dritte, neu durchgearbeitete Auflage. Bonn. 1872. Pp. 698.

A Manual of Midwifery. By Dr. Karl Schrœder. Translated into English from the third German edition by Dr. Charles H. Carter (London). New York: D. Appleton & Co. 1873. Pp. 388.

In 1847, Dr. Naegele, Professor in the University at Heidelberg, published a work on Midwifery which has ever since been considered the standard text-book in Germany. The author died (July 5, 1851) soon after his work was published, but several later editions were printed under the careful supervision of Dr. Genser, Professor of Midwifery at Dresden. Though every effort was made by the editor to keep the work up to the advanced views held by the real workers on this subject in the profession, it became more and more evident that a complete revision of the work was necessary. To do this, and yet retain the original work of Naegele, became an impossibility, and a pressing need was felt all through Germany for some new treatise which should give all the results of the recent researches in the physiology and pathology of gestation and parturition, together with the newest methods of treatment for the various complications which are met with in the lying-in room.

With a view to meet this want, Dr. Schrœder, Professor of Midwifery and Director of the Lying-in Hospital connected with the University of Erlangen, published in 1870 his work, the title of which we have given above. The demand for the book was very great, and in 1871 a second edition was published, followed the next year by yet a third.

The work is eminently a practical one, and omits all long discussions on still unsettled points, either of theory or practice. One of the most valuable portions of the book, as a work of reference, is the historical account with which Dr. Schrœder prefaces every new subject, thus enabling the curious reader to trace the various theories or facts back to their several chronological starting points. We regret, however, to notice that there is an omission of all anatomical description of the pelvic bones or the generative organs, the author referring the reader to works of anatomy for all the information required on these points. This, it seems to us, is really a serious omission, since few books of anatomy even allude to the pelvic planes, angles and diameters which, though possessing but little practical value to anatomists, are yet of such vital importance to obstetricians. Space will not allow of any lengthy notice of the various contents of the book, but we cannot help alluding here to the excellent chapter on puerperal fever, under which term are included all those various disorders which are incident to the puerperal state, and which owe their origin to the absorption of decomposing organic matter. He does not consider that puerperal fever is, strictly speaking, contagious, inasmuch as the secretions from patients suffering from this disease have nothing specific in themselves, but owe their origin to organic matter which is in a state of putrefaction, and which will produce puerperal fever in women who have been confined, just as they will give rise to phlegmonous erysipelas in surgical patients. For such absorption to take place, an abraded surface is necessary, and such are to be found caused by the passage of the child through the cervix uteri and the mucous membrane of the vagina and vulva.

As a text-book, we doubt if the work will be considered satisfactory. The author has treated his subject in such a condensed manner that the student, who is beginning the study of obstetrics, is often at a loss to understand many statements which a fuller explanation would have rendered intelligible. As a work for collateral reading, however, or as a book of reference for the practising physician, this very conciseness renders it all the more valuable.

The work has been admirably translated into English by Dr. Charles H. Carter (London), and recently published in this country by D. Appleton & Co. (New York). The plates are well drawn, and the publishers may congratulate themselves on the way in which their share of the work has been done. R.

Lectures on Clinical Medicine. By A. TROUSSEAU. Translated by Sir JOHN ROSE CORMACK, M.D., F.R.S.E., and P. VICTOR BAZIRE, M.D., from the third Revised and Enlarged Edition. In two volumes. Philadelphia: Lindsay & Blakiston. 1873.

THESE clinical lectures of Trousseau are not new to the medical world. Fully recognizing their importance as an exposition of clinical medicine by one of the masters, the Sydenham Society long ago published a translation from the French, and this Sydenham Edition has had wide-spread and well-merited favor among the profession. There is no occasion now to review a work which has become classical in its own department of literature, and which is a monument of scientific learning, zeal and skill.

We are therefore concerned, in this connection, rather with the manner than with the subject-matter of this publication. To fill a supposed demand among American practitioners, the publishers have, in these volumes, reproduced all the clinical lectures of Trousseau as originally translated by Sir John Rose Cormack and Dr. Bazire. By the use of closer type and thinner paper, and by the omission of M. Bazire's notes, the English edition, in passing through the American press, is reduced from five volumes to two. The order of the lectures is made to conform, in the American re-print, to their sequence as delivered by their author at Hôtel Dieu; they therefore appear without any other special relationship, one to another, than that of time. The typography of the American publication is very good, but it will not bear comparison with the London imprint. An unusually full index adds very much to the value of the newer work.

Those who wish to possess, in the English language, the great work of Trousseau, may now, through the enterprise of the well-known medical book publishers of Philadelphia, have the choice between the five, well-printed, carefully annotated, comparatively expensive volumes of the Sydenham edition, and the two rather bulky, closely-printed, inexpensive volumes of the American publication. What, in the latter, is sacrificed in appearance, is gained in facility of reference, and in usefulness to the traditional "busy practitioner."

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, NOVEMBER 20, 1873.

THE announcement in the morning papers of November 11th that on the previous day the death of a lady by ether had occurred in the practice of Dr. Eastham, a dentist in this city, caused much excitement in professional circles. The death had taken place about noon, but very few, except those particularly interested, were aware of it till the next day. The coroner, Dr. Ainsworth, who was called in directly after the accident, formed a jury of physicians and apothecaries and ordered an autopsy. This was made the next morning by Dr. R. H. Fitz, Pathologist to the Massachusetts General Hospital, and on the same day the jury met, and, having viewed the body, adjourned till the 14th. Before our last number went to press, we had barely time to collect sufficient evidence to justify the statement which we made that the anæsthetic was either chloroform or a mixture of chloroform and ether. The latter proves to be the one used. The jury met again on the 14th, and having heard a part of the evidence reädjourned till the evening of Wednesday the 19th. We shall refrain from comment on the evidence till the verdict is rendered, but present the following account of the proceedings which we condense from a complete stenographic report taken especially for us. On Nov. 14th, the first witness was Dr. Edson, who testified that he had twice attended Mrs. Crie, the deceased, during her confinements, but had never given her an anæsthetic, though she had desired it. This was owing to his disapproval of anæsthetics during labor, except in rare cases. He would have given one to the deceased as readily as to any patient in her case.

Dr. Fitz was next called, and read the following account of the autopsy:—

Examination made twenty-one hours after death. Body preserved in ice; rigidity well marked; no discoloration of face or anterior portions of the body; skull cap and dura mater normal; longitudinal veins empty; moderate amount of blood in the veins of the arachnoid; nothing abnormal observed at the base of the brain. The bloodvessels in this region contained but little blood; cerebral substance firm, containing much less blood than usual, not particularly moist; absence of any anatomical changes; ventricles apparently normal. Pericardium healthy. Heart moderately contracted, unusually small and of usual color; aorta of less than the normal calibre, walls unusually thin and elastic; cavities of the heart contained dark fluid blood, of no unusual odor or color; right side of the heart contained more blood than the left; valves healthy, muscular substance apparently normal. Pleural cavities healthy, containing a small amount of reddish fluid. Lungs of a bluish-red color, the posterior dependent portions quite dark; tissue contained air and a somewhat increased amount of blood; absence of any special degree of œdema; in upper lobes of both lungs a rare, small, cheesy nodule. The larynx, trachea, bronchial tubes and the larger vessels at the root of the lungs free from changes. Spleen of normal size and firmness, the color dark blue. Kidneys unusually firm, capsule rather more adherent than usual; in sections, the organ was of a grayish slate color; bloodvessels, including the malpighian organs, unusually distinct from the presence of blood; tubular structure apparently healthy. Bladder healthy. Uterus and ovaries well developed; an old *corpus luteum* present; the lining membrane of the body of the uterus unusually injected, covered with a viscid, bloody fluid. Liver of normal size, dark color, containing rather more blood than usual, otherwise healthy; stomach and intestines presented no unusual appearances.

The anatomical examination gave no evidence of recent disease of any of the organs, or of chronic alterations sufficient to account for death; the fluid conditions of the blood, the diminished amount in the brain and the increased amount in the thoracic and abdominal organs were abnormal, and might have been the result of various causes; the diminished size of the heart and of the aorta were probably of congenital origin.

Question. Do you consider the absence of blood in the brain and cerebral cavities as abnormal? *Answer.* Yes, sir.

Q. Do you ever find the blood liquid so long after death, except where chloroform is used? *A.* Yes, sir; it is so in any case of death from asphyxia, in cases of poison from certain gases, and in cases of some very malignant forms of disease where decomposition is very rapid.

Q. I suppose a perfectly healthy woman would not be likely to have this sudden change take place in her without some cause similar to those you have mentioned? *A.* Very unlikely.

Dr. Eastham then testified that he graduated in medicine in 1841, had practised dentistry nearly all the time since, and had used anæsthetics from their introduction. The deceased had been his patient for twelve or fourteen years, during which he had on several occasions given her anæsthetics, chloroform, ether and gas, both severally and in combination. The deceased came to his office in the forenoon of the 10th, and there met Mrs. Sawyer, whose tooth he extracted after giving nitrous oxide. Mrs. Sawyer urged the deceased to take gas, but she insisted upon ether. He made a mixture of a little *chloroform and ether*.

Question. You made a mixture at the time? *Answer.* Yes, sir; I usually do that way.

Q. Please tell whether or not on this occasion you measured the quantity? *A.* No. I have been so familiar with it that I usually guess at the proportion. I never measure it. I always calculate to have more ether than chloroform.

Q. How much of this mixture did you make? *A.* Not more than an ounce or an ounce and a half.

Q. How did you administer it? *A.* I always administer it on a sponge. I always drop the window at the top, so as to have fresh air. I pour on to this sponge (it is a hollow one about the bigness of my two hands) about a big teaspoonful, as near as I can judge.

Q. That would have been about a third of the mixture? *A.* No, not so much as that. I always begin gradually in applying it, first holding the sponge a little distance from the nose and then moving it nearer. As she began to breathe it, she says, "Give me enough this time, sure." This she repeated three times. I did not fully etherize her, nor did I intend to. After she had breathed two or three minutes, I said to her, "I am going to take this tooth out." She shook her head, as much as to say she was not ready, but I took hold of the tooth. She straightened back, groaned and screamed a little as if in pain. After I had pulled the tooth, she went back into a sort of hysterics, and became rigid, as if in spasms.

Q. At this point in the case, did you notice her lips, whether they were pale? *A.* Not much.

Q. Any change in her countenance? *A.* Not much.

Q. Did you notice her eyes? *A.* They were set wide open, like one in a spasm.

Q. You did not notice whether there was anything particular about the lips? *A.* No.

Q. Did you try the pulse at that time? *A.* No. I seized a napkin, moistened with water, and gave her a splash on the forehead. She seemed to revive, and I saw a flush of color come over her face. I set her up and took my ammonia water and applied that to her nose; then I spoke to Mrs. Sawyer. Mrs. Crie was sitting up in the chair, inclined a little forward at that time, and I was applying ammonia and water to the face. Mrs. Sawyer came in, and I asked her to loosen her dress, which she did. Then I saw a change again, back to paleness, and I said, "Call the other doctors." Dr. Osgood arrived first. We unloosed Mrs. Crie's corsets. Dr. Osgood rubbed her spine, and I sent the porter after another physician. We continued to rub her and apply very strong ammonia, and, finally, after Dr. Lamson came in, we removed her to the large room and, raising her arms, tried in every way to set up a respiration. We sent for a battery and used that. We worked over her till we all came to the conclusion that she was past all restoration.

Q. Can you tell us how long after she fell back into this spasm it was before respiration ceased? *A.* I should say about fifteen minutes.

Q. How long did the flush continue? *A.* It might have been two minutes.

Q. Then, as I understand, she fell back at once? *A.* As soon as the shade went back, I called for help. After administering these anæsthetics, there are two peculiar shades. There is the shade for faintness, and a shade from sickness at the stomach, and they are perfectly distinct.

Q. What was your opinion of this peculiar shade then? *A.* I thought it was a pallor from faintness.

Q. From the time she had this spasm and during the time you were administering the ammonia, was she sitting up in the chair? *A.* Yes, sir; but after the doctors came in they removed her to the waiting-room and laid her down.

Q. Was she breathing then? *A.* She was dead.

Q. How long had you begun the administration of ether before you extracted the tooth? *A.* About a minute or a minute and a-half.

Q. During that time did you feel no pulse? *A.* Never do that. Always watch the side of the head, the temporal artery.

Q. Do you think there is any danger of death occurring from giving ether alone? *A.* I never had anything that appeared like it myself; nor in chloroform.

Q. You have not considered then that there was any danger? *A.* No, I do not—that is, unless you administer it as they do in England. I should think they would kill every other one, by using a napkin as they do. But if chloroform be given as I give it on a sponge, with plenty of fresh air, I don't consider it any more dangerous than ether; but a person must discriminate between individuals, whether he would give ether, or gas, or chloroform or anything, and these things must be learned by practice.

Q. You considered her to be a person lacking somewhat in vitality, and therefore you did'nt choose to put her fully under the influence of it (the anæsthetic)? *A.* Yes, sir.

Q. Do you consider either of these anæsthetics more dangerous than the others? *A.* I suppose chloroform would decompose blood quicker than ether.

Q. Do you know of any difference in chloroform? *A.* I have never used but one kind, Squibb's.

Q. In what way do you keep it? *A.* Always in a dark closet and corked as tight as I can.

Q. Do you know of any difference in the quality of ether? *A.* No, only from the seller's opinion of it. I use Powers and Weightman's concentrated.

Q. How much of this mixture did you generally make at a time? *A.* Not more than a couple of ounces at once.

Q. What was the proportion of chloroform that you generally intended to have in? *A.* Less than half, by volume.

Q. Did you keep that mixture a long time? *A.* No, but I would most always add more ether if it had been standing a little while.

Q. Did you state that you made this mixture you administered to Mrs. Crie that day? *A.* I had a little in a bottle and I added more to it, before I gave it to her. I had used it a week before.

Q. What is your reason for adding in chloroform to the ether? *A.* Well, I think it is safer. Ether is a great stimulant, and when you have a little chloroform, the patients are not so noisy or excited as they are under pure ether. That is my reaaon, not that I feared one or the other.

Q. You would not hesitate to give any quantity of chloroform? *A.* No, sir. If amputation was to be performed I had as soon use chloroform as ether.

Q. On the whole, which anæsthetic do you consider the most safe? *A.* I think I should use ether for safety. Ether and chloroform combined, in my idea, is much better than either of them alone.

Q. Do you feel any anxiety when about to administer chloroform or ether or the mixture? *A.* No.

We understand that at the next meeting, Dr. Wood will give the results of his analysis of the anæsthetic, that Mrs. Sawyer will be examined, and that expert testimony on the use of anæsthetics will be heard.

We have said that we should make no comments on the evidence while the investigation is in progress, but we may without indiscretion express our gratification at Dr. Ainsworth's course in giving the affair a thorough and public examination. This should be done in every case of death from anæsthesia.

INFLAMMABILITY OF ETHER.—In a late number of the *British Medical Journal*, Mr. Hutchinson, writing upon ether, expresses an apprehension of danger from the inflammability of the vapor, and advises against its use after dark. Ether is employed at our hospitals indifferently by night and day—as it also is in midwifery. Its practical safety is doubtless partly owing to the fact that the air, cooled by its evaporation, establishes a downward current, so that a match placed a few inches above an ether sponge at the edge of a table will not ignite it; while below, the vapor readily takes fire. B.

The Hospitals.

MASSACHUSETTS GENERAL HOSPITAL.

(Saturday, November 15, 1873.)

THE following operations were performed:—Hare-lip, Ulcer of the Leg, Stone in the Bladder, Erectile Tumor of the Cheek, Mucous Cyst of Lip, Ingrowing Toe-nail, Tumor of the Back, Stricture of the Urethra with urinary extravasation and perineal abscess. On Monday, at the clinical lecture, Dr. Bigelow operated for Stricture of the Urethra.

The hare-lip, single, in a baby six months old, was complicated with cleft-palate. Dr. Bigelow operated by the method described in the last report.—Dr. Cabot amputated at the upper third of the leg in the case of a large and progressive ulcer of the leg, taking the flap from the calf. Grafting had been tried successfully by Dr. C., the ulcer having been reduced to the size of a cent, when he left the hospital. The tissue which resulted from the grafts, was stated by patient to have been the last to yield, when ulceration recurred. The ulcer nearly surrounded the leg.—The patient with stone was a man sixty years old. The usual symptoms had existed for a year, and in addition, during the past three months, he had suffered from frequent attacks of retention, relieved by the catheter. On examination under ether, the prostate was found to be enlarged, and the stone, after measurement by the lithotrite, one of unusual size. Dr. Bigelow remarked that the case, though unfavorable in any point of view, promised a better result from lithotomy than by lithotrity. He then performed the lateral operation. The prostate required free division in several directions, and subsequent dilatation by the forceps and fingers before the stone was extracted. The latter measured two and five-eighths inches in its longest diameter, by two inches in its shortest, and was one inch thick at the centre, diminishing slightly toward the circumference, being a flat ovoid, and weighing two ounces, three drachms and ten grains.—The tumor inside the cheek was erectile, and projected into the mouth at a point opposite the molar teeth. It was congenital and had been operated upon once before. Dr. Cabot strangulated it by ligature. Another growth of the same character existed upon the tongue.—Dr. Bigelow excised from the lip an inspissated mucous cyst, and cauterized its cavity with nitrate of silver.—He then performed evulsion for a toe-nail ingrowing at both sides, and with the spherical rasp destroyed the matrix at both corners, remarking that a radical operation best economized the time of this class of patients.—A small painful tumor of the sacral region had existed sixteen months within the patient's knowledge. It was adherent to the fascia over the gluteus maximus, and was removed by Dr. Cabot. Its gross appearance was that of a white fat containing a cyst. The inflammatory contents of the latter, together with its intimate connection with the bone, suggested its possible relation to an obliterated spina bifida.—A middle-aged man had had stricture after gonorrhœa complicated with local injury from the recoil of a gun. A large urinary abscess occupied the perineum, and the patient was suffering from retention. Dr. Cabot evacuated the abscess and opened the urethra behind the stricture. The latter was then dilated by a Voillemier's instrument and an elastic catheter left in the bladder.—On Monday, Dr. Bigelow, during his clinical lecture, dilated with the same instrument a close, double stricture of long standing.

H. H. A. Beach, M.D.

Medical Miscellany.

It is proposed, in Italy, to erect a monument to Eustachius. Few anatomists have had their trumpet so much blown.

Modern Surgery.—Under this title, Mr. Erichsen has published his Introductory Lecture at University College.—*Dublin Medical Press and Circular.*

Prof. Sigmund, of Vienna, has obtained a six months' furlough, and intends spending the winter in Italy. Prof. Zeissl is spoken of as likely to continue the class for the present.—*British Medical Journal.*

A petrified child has been exhumed at Cheyenne, Wyoming Territory, according to a writer in the *Cincinnati Lancet and Observer.* It had been dead for two years, and is described as absolutely perfect and statue like.

Commencement at the Medical department of Dartmouth College occurred on November 5th. The address was delivered by Dr. A. H. Crosby, the graduating class numbering twelve.

Chloral in Cholera.—Dr. Nepveu *(Gazette Méd.)* has found some service in using chloral in cases of cholera in doses of four grammes (sixty grains) in a cup of tea. He cites two or three cases as evidence of this. Opium, he says, acts slowly; chloral rapidly, and in fifteen or twenty minutes produces a sound sleep. When it is rejected by the mouth, it may be subcutaneously injected in very concentrated solutions.—*The Doctor.*

The Cholera in Europe.—There has been a slight increase in the number of cases in Vienna lately. From the 8th to the 15th of October, there were 72 cases; the mortality amounts to 72 per cent. There have been reported, thus far, in Berlin, 996 cases, of which 669 have proved fatal. There were 64 deaths in Havre from the 10th to the 17th of October. Sixteen deaths from cholera are reported during the week in the Paris hospital in the *Progrès Médical.*—*British Medical Journal.*

Thirty Children Poisoned.—The London *Chemist and Druggist* gives an account of a singular case of wholesale poisoning at Blackburn, England. At a coroner's inquest, held on account of the sudden death of a child three years old, it was proved that on the previous Wednesday a quantity of ashes had been carted from the extensive manufactory of Messrs. Jackson Brothers, George Street West. With these ashes there had been intermingled a quantity of arsenical soda, which had been supplied to the Messrs. Jackson for manufacturing purposes. The deceased and twenty-nine others had picked up the soda in question under the impression, from its crystallized appearance, that it was alum, and had sucked it. The deceased died from its effects, and all the others had been attacked with sudden illness, but only one other case proved to be fatal.—*Boston Journal of Chemistry.*

Running a Poison to Ground.—Dr. Corfield, who acted as medical inspector of the suspected farms during the late epidemic of typhoid fever caused by the distribution of infected milk by the Dairy Reform Company, stated last week, in Birmingham, in reference to this epidemic, that "the cause of that epidemic is known with absolute certainty, the very channel by which the poison got into the dairy-well having been recently unearthed." We believe that a direct communication has been traced, from the very spot at which the typhoid excreta were buried, into the well, and that the typhoid poison which infected the milk has been literally run to ground.—*London Medical Record.*

Dislocation of Vertebræ.—Dr. J. W. Brooks, of Chicago, reports the following interesting case in the *Chicago Medical Journal* for Nov., 1873 :—

Sept. 26th, 1872, I was requested hurriedly to visit F. B., a delicate, pale boy of 8 or 9 years. On arriving, I learned that on the previous evening, while playing at somersault in his father's parlor, he had injured his neck. Examination revealed a sub-atlo axoid luxation. The chin was directed a little upward and to the right; the head was immobile; there was some numbness below the seat of injury, in all the members of the body; he was exceedingly nervous; there was no intense pain, but, as he expressed it, "it hurt all the time;" with a pale, damp, cool skin. With an assistant to steady and hold down the shoulders, and standing directly behind him (he being half recumbent), with a hand on either side of the cranium, and the forefinger separated from the middle finger so that one forefinger of each hand would come before the articulation, and the middle finger of each hand behind, I proceeded to rotate carefully, and at the same time to make counter-extension; presently an audible click announced the return of the parts to their normal position. Convalescence was soon established.

NOTES AND QUERIES.

Medical Mules—the offspring of the union whose "happy consummation" was so aptly described in the last Journal, p. 490! Fortunately for the community, mules cannot propagate.
Pestle.

Erratum.—In issue of the Journal for Nov. 6, 1873, page 448, line 32, for "increased" read *incurred.*

Mortality in Massachusetts.—*Deaths in eighteen Cities and Towns for the week ending November* 8, 1873.

Boston, 157—Charlestown, 15—Worcester, 18—Lowell, 13—Chelsea, 4—Cambridge, 16—Salem, 6—Lawrence, 18—Lynn, 14—Gloucester, 6—Fitchburg, 6—Taunton, 5—Newburyport, 7—Somerville, 8—Fall River, 29—Haverhill, 3—Holyoke, 4—Pittsfield, 4. Total, 333.

Prevalent Diseases.—Consumption, 62—typhoid fever, 22—scarlet fever, 19—pneumonia, 19—croup and diphtheria, 14.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, Nov. 15th, 128. Males, 71; females, 57. Accident, 3—abscess, 2—apoplexy, 2—asthma, 1—inflammation of the bowels, 1—disease of the bladder, 1—bronchitis, 3—inflammation of the brain, 4—disease of the brain, 6—cancer, 4—cholera infantum, 2—consumption, 20—convulsions, 2—debility, 1—diarrhœa, 1—dropsy, 2—dropsy of the brain, 1—dyspepsia, 1—exhaustion, 1—scarlet fever, 13—typhoid fever, 4—gangrene, 1—gastritis, 2—disease of the heart, 6—intemperance, 2—disease of the kidneys, 6—disease of the liver, 1—inflammation of the lungs, 10—congestion of the lungs, 3—laryngitis, 1—marasmus, 4—measles, 1—noma, 1—old age, 6—pleurisy, 1—rheumatism, 1—scalded, 1—septæmia, 2—spina bifida, 1—tumor, 1—tabes mesenterica, 1—unknown, 1.

Under 5 years of age, 42—between 5 and 20 years, 13—between 20 and 40 years, 26—between 40 and 60 years, 24—over 60 years, 23. Born in the United States, 87—Ireland, 32—other places, 9.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

ON THE USE OF CATHETERS IN HYPERTROPHY OF THE PROSTATE.

By T. B. CURTIS, M.D.

THE object of this paper is to draw attention to certain practical points relating to the treatment to be used in cases of enlarged prostate, and particularly to set forth the value, in such cases, of the *vulcanized India-rubber catheter*. This instrument, which has long been in general use in Paris, is comparatively little used or known in Great Britain and in this country, and its many advantages are certainly underrated.

Hypertrophy of the prostate is a disease for which we may expect to be frequently called upon to give advice; Sir H. Thompson estimates that enlargement exists in some degree in one out of three individuals after 60 years of age, and that it produces marked symptoms in one out of seven or eight at that age and upwards. Fortunately, though we are able, as yet, to do nothing to cure, we can do much to relieve the sufferings and to prolong the life of those afflicted with this disease. The main feature of treatment in such cases is the use of *catheterism* to relieve retention of urine, complete or partial, with all the attendant suffering and disturbance to the system due to attacks of absolute retention, to retention with incontinence of urine by overflow, or to partial chronic retention with general poisoning by stagnating and decomposed urine. In many such cases, catheterism is our great resource; not only may it be indicated as an occasional measure when an attack of local congestion, induced by cold or by excess at table, has caused stoppage of micturition, with extremely distended bladder, but in many cases it may become necessary to resort to the constant use of the catheter, repeated several times daily, for months, or even years; with some patients, the normal function of micturition has to be superseded, during the remainder of life, by the artificial evacuation of the urine through a catheter, which the patient has to learn to introduce for himself when required. Then again, in other cases, when catheterism is found extremely difficult, through the existence of false passage or through any other cause, or when irritability of the bladder occasions very frequent calls to evacuate its contents, it may be advisable to tie in an instrument, either permanently or only at night, with a view to permitting undisturbed rest.

It is easy to understand how important is the choice of the instrument which is to be used so continuously, or in such unfavorable circumstances as prevail in cases where the catheter has to be introduced several times a day, perhaps by inexperienced hands, or else left permanently in the urethra; and we can comprehend how desirable it is to reduce to a minimum the risks of injury and of irritation.

Before entering upon a description of the instrument to which we wish to call attention, we beg to be allowed to make a few brief remarks upon the necessity which exists in all cases of retention, whatever may appear to be the cause thereof, of making a methodical exploration of the urethra before attempting to pass a catheter. In many cases, such an exploration may be quite superfluous, and the first catheter used goes easily through the urethra into the bladder; on the other hand, cases continually occur where such is not the case, and where the immediate use of a metallic or of a flexible, straight and pointed instrument may be fraught with difficulty and even danger. A preliminary exploration with a flexible bougie, tipped with a good sized olive-shaped bulb (of No. 18 calibre, of the French scale) is a rapidly performed and perfectly harmless operation, which may serve to reveal the existence of difficulties till then unsuspected, such as latent stricture, accompanying the principal disease, false passage, deep lacunæ, &c.; it is certainly a generally accepted rule that diagnosis, as thorough as possible, should precede measures of treatment, and in this particular case we hold that no attempt to relieve retention should be entered upon without our previously investigating the presumable causes of the retention and the condition of the parts through which the catheter is to pass. Dr. Guyon, who has succeeded Civiale in the ward devoted to urinary surgery at the Necker Hospital in Paris, is in the habit of laying great stress upon this point, and he strongly recommends the use of the olive-tipped bougie as the best instrument for such an exploration as is here advised.

When we have determined the condition of the urethra and recognized that its calibre is sufficient, and that it offers no other obstruction than that caused by the enlarged prostate, we may safely apply ourselves to the selection of the most serviceable catheter and to its introduction. For this purpose, we have the choice of several instruments:—1st, the *silver catheter*, of varying length and curve; 2d, the *English gum catheter;* 3d, the *French gum catheter*, cylindrical or conical, with a bulbous tip; and, lastly, the vulcanized *India-rubber catheter*. The first three kinds of catheters are well known and require no description; the last seems to be quite unused, the English gum catheter being generally considered to be the most useful of all in hypertrophy of the prostate. (See Sir H. Thompson on Diseases of the Prostate; and J. W. S. Gouley on Diseases of the Urinary Organs.)

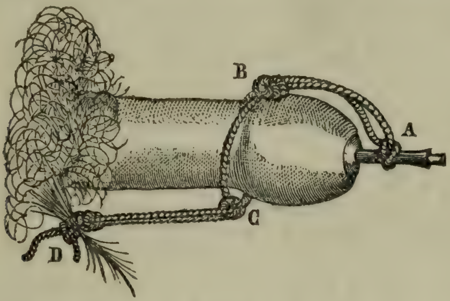
The vulcanized India-rubber instrument, however, seems, if we may judge by the practice now prevalent in the Paris hospitals, and particularly in the Civiale ward of the Necker Hospital, to be of all catheters the most suitable for cases where retention is due to loss of power of the bladder, or to increase of volume of the prostate, and for cases where difficulty of catheterism results from change of direction of the urethra rather than from narrowing of its calibre, or the existence of false passage. For stricture, a slender instrument, either flexible or metallic, is of course necessary; in cases of false passage, though a somewhat voluminous and flexible instrument like the India-rubber catheter will often glide past the orifice of the false passage without entering it, a silver instrument, which can be directed along the sound wall of the urethra, is often indispensable. But, apart from these cases, it is now the general practice in Paris, in cases of retention, to make first a fair trial of catheterism with a small rubber catheter preferably to any other instrument, and in the great majority of cases this first attempt proves successful.

The following, then, are the cases for which the use of this catheter is to be generally recommended:—1st. In retention caused by paralysis of the bladder accompanying paraplegia. 2d. In retention caused by acute prostatitis. 3d. In retention caused by hypertrophy of the prostate. Having thus briefly enumerated the cases for which the rubber catheter is most suitable, we will proceed to describe the instrument, and to state the reasons for which it appears preferable.

The rubber catheter, first manufactured by Galante, of Paris, was brought into use by Maisonneuve and Nélaton, soon followed by the generality of French surgeons. These catheters are of all sizes, from No. 12 of the French scale upwards, but by far the most useful are those comprised between Nos. 16 and 20 ; they are perfectly cylindrical, with a rounded end and an even, smooth surface. The instrument possesses the following qualities:—1st. It is perfectly supple, so much so that it can be easily wound round the finger. 2d. It is not acted upon by the urine or by the secretions of the mucous membrane; it neither acquires a phosphatic crust, as the gum catheters rapidly do when tied in, nor does its surface in any way become deteriorated, even by a prolonged sojourn in the urethra, whereas the black gum catheter is found, in a very few days, or even hours, to become so rough by disintegration of its coating as to necessitate removal. The perfect flexibility of the instrument is the cause of the facility with which it finds its way, of itself so to speak, into the bladder, requiring no guidance, but only a succession of short quick pushes, which propel it along the urethra; if any obstacle is encountered by the bluntly rounded tip, the pliable shaft, immediately bending, ceases to transmit the forward impulsion. It is, therefore, absolutely impossible to inflict an injury with this instrument, or to create a false passage, however awkwardly it may be handled. Nor does its use require any skill or practice; it is only necessary that the instrument, well oiled, should be held with the finger tips quite near the meatus, so as to send in only a half-inch or so of the shaft at each push; at the same time, the surgeon should keep the urethra well stretched, with the left hand, by firm traction upon the penis. It is a mistake to use this catheter with a stylet, as some authors recommend; this way of proceeding deprives the instrument of the valuable quality of pliability, which enables it to insinuate itself through a tortuous urethra, as it will often do in cases where catheterism with a silver instrument is so difficult as to baffle the patient efforts of a most skilful surgeon. Another advantage which accrues from the suppleness of this instrument is that it is of all catheters the one whose continued presence is most easily tolerated by the urethra; it causes much less discomfort to the patient than the gum catheter, and it is not so apt by its presence to set up prostatitis or cystitis, much less to occasion sloughing of the floor of the urethra at the sub-pubic bend; it is well known that the more rigid gum catheter sometimes, in this way, causes perforation of the wall of the urethra, thereby producing a very troublesome fistula, which necessitates a plastic operation of difficult performance and uncertain issue. The second quality of retaining an unimpaired surface, however long the instrument may be left in the urethra, is also a reason why it should be preferred for tying in.

The only defects of this catheter are its rather small bore and the difficulty sometimes experienced in fastening it so as to prevent its escaping from the urethra in consequence of its extreme flexibility. The smallness of the bore, due to the necessary thickness of the soft wall of the catheter, renders it apt to get easily clogged up by mucus, pus, clots, &c., but it can always be readily cleared by sending a little water through it with a syringe. To keep it securely tied in, several devices have been used; one consists in introducing into the distal half of the catheter a metallic tube four or five inches long, with a view to rendering this part of the instrument rigid, and so to prevent its escaping by worming itself out between the meatus and the means of attachment. A simpler mode of accomplishing this result was instituted by the author, and has succeeded extremely well. It consists in dipping the distal portion of the catheter, supported by a wire stylet, into collodion, which hardens in a few seconds, and leaves the part so treated quite stiff; two or three successive dips are necessary to give sufficient rigidity. This preparatory treatment gives a coating of glassy smoothness, which perfectly withstands the action of moisture and of bodily heat. We would like to add, in parenthesis, another analogous use of collodion: a fine bougie, of which the tip, bent into an angular or bayonet shape, is dipped an inch deep into collodion, acquires in a few minutes and after two or three dips, a *rigid extremity* of any curve that may appear desirable; this little expedient is sometimes very useful in dealing with stricture which is difficult to get through on account of the passage through it being tortuous or deviated from the axis of the urethra.

While upon the subject of tying in, we wish to take the opportunity of calling attention to a very ingenious and simple way of fastening catheters to the pubic hairs. The accompanying wood-cut shows the *modus operandi;* perhaps a few words of explanation may make the thing more easily understood. A string eighteen or twenty inches long is tied by its middle around the catheter at A, near the meatus. The two ends are knotted together at B, and then carried around the penis, one above the other below; they are then again knotted together, so as to form a loop loosely encircling the corona glandis, and carried together to a lock of pubic hair at D, close to the root of the penis. This means of attachment was devised not long ago by Sir Henry Thompson, who now uses it quite exclusively; on trial, it will be found to be a very neat, simple and efficient way of tying in a catheter.



45 *Mt. Vernon Street, Boston, Oct.* 17, 1873.

Dressing of Stumps in France.—At the scientific congress lately held in Lyons (medical section), a discussion took place on the subject of the dressing of stumps after amputation. Prof. Verneuil, of Paris, after reviewing the different dressings in use (open dressings, immediate union by sutures, antiseptic dressing of Lister, &c.), expressed a decided preference for the cotton-wool dressing of M. Guérin, as being that which enabled the surgeon most successfully to cope with the detestable sanitary conditions afforded by the Paris hospitals. The only fault he found with this dressing was the slowness with which granulation went on under the cotton wool, but the advantage of greater safety far outweighed this objection.

Dr. Ollier, of Lyons, said that he had also adopted the cotton-wool dressing, over which he is now in the habit of applying a roller steeped in soluble glass (silicate of potassa), to make the dressing less liable to become loose.—*Le Mouvement Médical,* Sept. 27th, 1873.

Progress in Medicine.

REPORT ON DISEASES OF THE THROAT.

By F. I. Knight, M.D.

[Concluded from p. 513.]

Laryngoscopy.

(1.) Weil. { Entgegnung.
Tobold. { Schlussbemerkungen. Deutsches Archiv für Klinische Medicin, xi. Band, iii. Heft.

(2.) Review of Voltolini. Schnitzler. Wiener Med. Presse, xiv. Nos. 1, 2 and 4.

(3.) Von der allgemeinen Poliklinik in Wien. ii. Sektion. Abtheilung für Hals und Brustkrankheiten des Docenten Dr. Schnitzler. Spezialbericht, erstattet von Dr. R. Coen, Assistenten, &c. Wiener Med. Presse, Feb. 23, 1873.

(4.) Lectures on the Surgery of the Nares, Larynx and Trachea. Cohen. Philadelphia Medical Times, Jan. 25.

(5.) Aus dem K. K. Garrisons-Spital, No 1, zu Wien, Mittheilungen über die daselbst im Jahre 1872 behandelten Kehlkopf, Hals, und Nasenkranken. Von Dr. Sidlo. Wiener Med. Woch., June 28, 1873.

(6.) The Laryngoscope an American Invention. By G. Troup Maxwell, M.D., of Middletown, Del. New York Medical Record, Jan. 15, 1873.

(6.) Dr. Maxwell claims that the idea of examining the larynx by means of a mirror occurred to him before he had heard of Czermak's experiments, and before any notice of them was published in this country; and that he had an instrument constructed for this purpose. He has made no public mention of this before, in the first place, on account of the war, and afterwards he had waited until now for Tiemann & Co., who had made the instrument, to find a note of it upon their books.

Parasitic Diseases.

(1.) Scheff. Soor im Kehlkopfe. Wiener Med. Presse, No. 25, 1873. (Allg. Med. Central-Zeitung, June 25, 1873.)

(2.) Fraenkel. Vorstellung eines Falles von gutartiger Mycosis des Pharynx. Allg. Med. Central-Zeitung, xlii. Jahrgang, 17 Stück.

(2.) At the meeting of the Berlin Medical Society Jan. 29th, 1873, Herr B. Fränkel presented a case of benign mycosis of the pharynx. This was discovered accidentally in the beginning of the previous month in one of his pupils in the laryngoscopic course, and had existed since that time without any symptom of disease, except a slight chronic pharyngeal catarrh. Over the tonsils and follicles at the base of the tongue were to be seen separate white elevations, a line in height, and as large as the follicles under them. They did not give one the impression of hard pellicles, but resembled rather formations of mould; when removed, they rapidly re-formed. When examined under the microscope, they were seen to consist of epithelial cells; many little round bodies (micrococci) sticking to them, and also in active motion in the surrounding fluid; and numerous little rods of various lengths, also partly in motion. Herr F. remarked that without thorough examination such a case might be confounded with diphtheria.

Paralysis and Cramp.

(1.) On Palsy of the vocal cord from intra-cranial Syphilis. J. Hughlings Jackson, M.D., F.R.C.P. &c. British Medical Journal, Jan. 25, 1873.

(2.) Eigenthümliche Sprachkrämpfe. Von cand. Med. Moeli in Leipzig. Archiv der Heilkunde, xiv. Jahrgang, i. Heft.

(3.) Aneurism of the Arch of the Aorta, with laryngeal Symptoms; death; clinical remarks. G. Johnson. Lancet, Dec. 7, 1872.

(4.) Changes produced in the Recurrent Laryngeal Nerves in Cases of Thoracic Aneurism. R. J. Lee, M.D. Lancet, Jan. 25, 1873.

(5.) A Case of Diphtheritic Paralysis (Headland) Lancet, Feb. 8, 1873.

(6.) Paralysis of left vocal cord; relief to dyspnœa from tracheotomy; death. Autopsy—aneurism of arch of aorta. Teale. Lancet, Feb. 8, 1873.

(7.) Paralysis of both posterior crico-arytenoids; aneurism of arch of aorta; relief from tracheotomy. On autopsy, only the left vagus and recurrent found implicated in the walls of the aneurism. George Johnson. Lancet, Jan. 4, 1873.

(8.) Paralysis of vocal cords; tumor in the œsophagus, involving both recurrent laryngeal nerves. Le Fort. L'Union Médicale, April 10, 1873.

(9.) Pharynxpolypen mit reflectorischer Stimmbandlähmung. Bd. 11, Heft 7, p. 575. Gerhardt. Deutsches Archiv f. Klin. Med.

(10.) Functioneller Larynxkrampf. Gerhardt. Deutsches Archiv f. Klin. Med. Bd. 11, Heft 7, p. 580.

(11.) Frequently recurring spasm of the glottis dependent upon chronic hyperæmia of the larynx. A. H. Smith, M.D. N. Y. Med. Record, Aug. 15. [Relieved by four applications of perchloride of iron and glycerine (ʒi., ℥i.)].

(12.) Die Laryngoscopie an Thieren. Schmidt. Tübingen. 1873. Pp. 106.

(1.) Dr. Jackson calls attention to the occasional nervous origin, so to speak, of syphilitic aphonia. He says it would be unsafe, when a patient who is manifestly the subject of syphilis, becomes aphonic, especially if he has any nervous symptoms, to conclude, without looking into that organ itself, that he had syphilitic disease of the larynx. It would be as unjustifiable as concluding, without ophthalmoscopic examination, that his blindness, if he were blind too, was owing to syphilitic changes in the eye itself. The fact is that in some cases of "syphilitic aphonia" there is no other abnormality discernible in the larynx than paralysis of one vocal cord. In these cases, the palsy may safely, in a person presenting outward signs of syphilis, be put down to syphilitic disease affecting the rootlets of the eighth nerve. Dr. Jackson is convinced that, in practice, aphonia from intra-cranial syphilis is not exceedingly uncommon. He refers to two cases corroborative in clinical and *post-mortem* appearances of the above statements, which cases were published in the London Hospital Report, vol. iv., 1868, pp. 314 and 318.

(12.) In our last report, we gave an abstract of an article by Schmidt, in which he gave an account of the appearances in the larynx of a cat, after section of one recurrent laryngeal nerve. In the present monograph, he gives the results of further experiments, giving the results of section of various laryngeal nerve branches and muscles, singly and in combination, as seen in the laryngeal mirror. The series of experiments is quite complete, the notable exception being that of section of the spinal accessory, which it may be very hard or impossible to make in the cat before anastomosis. The only reference to the spinal accessory seems to be an interrogation mark after one of the conclusions quoted from the results of Navratil's experiments, i. e. that this nerve (the spinal accessory) "has no influence on the muscles of the vocal cords."

The experiments are preceded by an account of the anatomy and the normal laryngoscopic appearance of the cat's larynx.

After section of *both recurrents*, the following appearances were noted : on inspiration, the vocal cords approached each other so that they almost touched, and during forcible inspiration approached still nearer each other, and separated a little during expiration. Touching the vocal cords, ventricular bands and the epiglottis with the sound did not excite cough so quickly as in the normal condition. Respiration was much less frequent, deeper, and was for some hours after the operation accompanied by loud râles. The inspirations lasted much longer than the expirations. After a few hours, the respiration became quiet, and remained so unless the animal was disturbed, as by laryngoscopic examination. On the third day, the respiration was quiet, even during the examination. The laryngoscopic examination showed that the glottis was always open, and was somewhat wider than it was on the preceding day, even at the end of expiration.

In the account of the effects of section of one recurrent laryngeal nerve, an additional fact, besides those mentioned in our last report, and one of considerable importance, is given, i. e. that the sensibility seemed to be somewhat diminished on the affected side. After section of *one superior laryngeal* nerve, at the first glance, it was difficult to notice any variation from the normal condition, but careful observation showed clearly that the vocal cord of the side on which the section had been made, was a little longer than that of the opposite side, and that the vocal process of this side stood a little further outward and backward. The sensibility of the side on which the section was made was much diminished. In a second animal, the sensibility on the side of the operation was completely lost.

The voice in the first case immediately after the operation was strong, but hoarse and somewhat lower in pitch.

In the second case, it was much hoarser and deeper, and the animal, which before the operation had frequently mewed, in the two first days after the operation was remarkably quiet, but on the third day mewed again frequently. The variation in the form of the glottis is due to the paralysis of the left crico-thyroid muscle. The left crico-arytenoideus posticus obtains a little preponderance, and draws the left arytenoid cartilage outward a little more forcibly.

After section of *both superior laryngeal nerves*, laryngoscopic examination showed that the glottis had a symmetrical form and offered no noticeable departure from the normal condition. The changes described above, now having occurred on both sides, were so slight as to be unnoticeable. In one animal, the sensibility was much less than in the normal condition, and in the other it was completely abolished. The voice was deeper and much hoarser than after section of one superior laryngeal nerve. Dr. Schmidt says that the function of approximating the lower edge of the thyroid cartilage to the upper border of the cricoid, and thereby increasing the tension of the cords, is often very erroneously ascribed to the crico-thyroid muscle.

According to others, the muscle draws the upper border of the cricoid cartilage upwards. If the crico-thyroid muscles, having been laid bare, are irritated by the electric current, the latter movement is in fact accomplished.

The function of the crico-thyroid muscles in phonation, therefore, according to this result, would be to maintain the anterior insertions of the vocal cords in a fixed position.

Division of the *crico-thyroid muscle* on one side gave a little different result from division of one superior laryngeal nerve, inasmuch as the vocal cord on that side presented a rectilinear edge, which was not the case when the nerve was divided. Farther experience can alone determine whether this was an individual peculiarity or whether the division of the superior laryngeal nerve in fact causes a little variation in the form of the glottis from that seen in division of the muscle simply.

Division of the *crico-thyroid* muscle and of the lateral *crico-arytenoid* muscle on one side produced the following laryngoscopic appearances. During ordinary respiration, the glottis had the same form as after division of the crico-thyroid alone.

On phonation, however, the arytenoid cartilage, with its vocal cord, did not move up to the median line on the side which had been operated upon, but the other arytenoid cartilage and vocal cord crossed the median line, producing a bend in the line of the glottis with its convexity towards the side which had been operated upon. Moreover, the arytenoid cartilage of the affected side stood farther backward and upward in consequence of the action of the posterior crico-arytenoid. The voice was still deeper and hoarser than in paralysis of the crico-thyroid alone.

Division of *both crico-thyroid and lateral crico-arytenoid muscles* produced the following appearances. The glottis was of a perfectly symmetrical, regular, triangular form. The two sides of this triangle formed perfectly straight lines, so that no projection was noticed in the place of the vocal processes. The arytenoid cartilages were strongly rotated outward, and executed scarcely any respiratory movement.

On phonation, the arytenoid cartilages touched quite symmetrically in the median line; they executed no movement backwards and upwards. Between the vocal cords and the processus vocales there remained a large, triangular opening. The voice was replaced by a very hoarse, deep and rather weak noise, as was to be expected on account of the large opening remaining in the glottis, even during attempted phonation. The sensibility of the vocal cord in the last three cases was completely normal. The last experiment shows that the thyreo-arytenoidei muscles, which are here uninjured, bring the vocal cords considerably nearer the median line on attempted phonation. A complete approximation, however, is impossible, because the conjoint action of the lateral crico-arytenoid is wanting.

According to these experiments, then, we find the results (1) of paralysis of one crico-thyroid muscle to be rotation of the arytenoid cartilage outward, and a rectilinear position of the edge of the vocal cord during ordinary inspiration; (2) of paralysis of both crico-thyroid muscles to be a symmetrical triangular glottis with rectilinear edges of the vocal cords and strong rotation of the arytenoid cartilages outward.

The principal results of paralysis of the lateral crico-arytenoid muscle are as follows: (1.) On one side, during ordinary respiration, no change; during phonation, a curve of the line of the glottis towards the affected side and two chinks, between the vocal cords and between the processus vocales. (2.) On both sides, during phonation, a large, triangular opening remains between the vocal cords and the processus vocales.

So we see that on section of the crico-thyroid muscle changes were found only on ordinary respiration, and, on section of the lateral crico-arytenoid, only on phonation.

Section of the arytenoideus transversus muscle.—Immediately after the section, the cartilaginous glottis was widened a little posteriorly.

The interstium inter-arytenoideum became somewhat larger. During quiet respiration, the rima glottidis, between the posterior ends of the vocal cords, the processus vocales and anterior ends of the cartilaginous glottis, is somewhat narrower than normal. It strikes the eye so much the more, as the ary-glottis is somewhat broader. On intonation, the vocal cords and vocal processes touched each other, but a triangular opening remained between the arytenoid cartilages posteriorly. The voice was hoarse, deeper and weaker. Diplophonia (Gibb) at times existed.

Section of the thyreo-arytenoideus muscles and the recurrent branches going to them.—On intonation, the edges of the cords, instead of being straight, were concave, thus leaving a small, elliptical opening. The voice was weak, hoarse, and lower than usual.

Section of both crico-arytenoidei postici muscles.—On respiration, both vocal cords stood near the median line. The arytenoid cartilages were nearer each other than after section of both recurrent nerves. On inspiration, the vocal cords approached each other, and on expiration separated. After section of the second muscle, the dyspnœa was so great that tracheotomy was performed. There was no voice, even when the tracheal opening was closed.

Dr. Schmidt also tried the application of morphia, and morphia and chloroform to the larynx of the cat without much effect upon its sensibility.

We have given above only a mere outline of a few of the experiments made by Dr. Schmidt. The monograph contains many others, and we recommend its perusal to those interested in the physiology of the larynx.

THE GERMAN SCHOOLS OF MEDICINE.—The number of students in the Vienna Medical Faculty diminishes sadly from year to year. Since Oppolzer's and Skoda's death, the diminution is very marked. Where one could with difficulty get within ear-shot in days gone by, on account of the number attending, the wards now, it is stated, are almost empty.—*British Medical Journal.*

Bibliographical Notices.

An Essay on the Principles of Mental Hygiene. By E. A. Gorton, M.D. Philadelphia: Lippincott & Co. 1873. 12mo. Pp. 240.

This book is a useful addition to the literature on the above subject. The discussion of matters relating to the preservation of mental health necessarily runs in familiar channels. We therefore expect a chapter on the "Mental Influence of Physical Agents," and are prepared for others on "The Reciprocal Influence of Corporeal and Mental Exercise," on "Moral and Religious Influences," and even for the final one on "Marriage," though the title suggests for a moment the cheap books of "Advice, &c.," on that delicate but important subject.

In the first two chapters, tables are given showing the influence of the seasons, of sex, and of age on insanity and suicide. Also on the relations of ignorance to crime, of ignorance and crime to sex, of the seasons to crime, and of crime to insanity. These important relations must eventually come to be understood and acted upon by the public and by law makers, as well as by scientists and physicians, and all sincere attempts to elucidate them for the public benefit should be welcomed.

In these chapters, also, the effects of diet, drugs and stimulants are considered, with unnecessarily long quotations, it seems to us, from poets and novelists, of the wonderful powers of coffee, opium, tobacco and haschish. The author, however, is evidently an anti-tobacco and total abstinence advocate. We might also fairly suspect him of being a homœopathist, since, in speaking of the special effects of drugs, he mentions "the destructive mania produced by over doses of belladonna; the jealous furore of hyoscyamus; the religious melancholy of pulsatilla anemone; the obstinate self-will and combative humor of sulphur or chamomile; the ill humor and passionate irritability of nux strychnos; the moral perversion of mercury; the dejected and sorrowful humor of ignatia, lycopodium and a few other drugs; the *lascivious* influences of Peruvian bark," &c. &c.

In the third chapter, the author deprecates the tendency to excessive physical culture. To develop the body at the expense of the mind is, he thinks, a grave error, and tends to put back the moral progress of the age. The will, he very justly argues, is impotent to reform defects of character, founded on organic and constitutional bias, either congenital or acquired. He quotes Emerson and other writers in support of the opinion that physical and intellectual culture, at the exclusion of the moral element, is the mistake of the age. Many readers will deny, however, that the natural type and outgrowth of such a culture is seen in the learned murderer, Ruloff! This entirely abnormal character was morally deficient to the verge of, if not to the extent of, actual insanity.

Many instances and tabulated statistics are given to show that a high degree of mental culture is favorable to long life. Also a table showing the "Progressive Decrease in the Sum of Vitality, of three Classes of Inhabitants, of Preston, England," including the gentry, tradesmen and operatives. The numbers in a hundred remaining alive at the end of the first year, are, respectively, 90·8, 79·6 and 68·2.

This order is maintained throughout, and the proportions become more and more striking. At eighty years, for instance, we have 8, 4·5 and 2·1. Allowance must, of course, be made for the inferior sanitary condition of the poorer classes. He puts ("according to statistics recently published in this country") the average duration of the lives of philosophers and physicians at 68. The clergy come next, and lawyers next, while the average age of farmers is but 50. In examining the mortality list of members of the Massachusetts Medical Society from 1781 to 1870, we find the average age of physicians in this State falls short of the above average. In 850 deaths, the average was 59 years.

Our author seems rather in advance of the latest scientific investigators, since he states positively that the moral faculties in a well balanced mind comprise about one fourth of the cerebrum. Also, in speaking of Ruloff, he asserts that dissection of his brain demonstrated inordinate strength and activity of both the passions and the intellect, while the conscience and the moral brain were singularly defective. He gives no authority for these assumed localizations, and it is to be feared they rest on no better than phrenological evidence, which, to the scientific mind is, to say the least, very unsatisfactory and inconclusive.

After speaking generally of the impulses and emotions, and of various forms of religious belief, he mentions in detail the following moral agents and their effects, viz., faith, cheerfulness, temperance, music, art, conversation, literature, love, friendship, society, industry, poverty and prayer, devoting a final chapter to that most efficient moral agent, marriage. It will be seen that the author's method, as well as his matter, is at times unscientific and unsatisfactory. There are, however, many interesting facts, figures, arguments and quotations, which make the book readable and useful, especially as it is in a line of investigation till of late too much neglected. T. W. F.

BOOKS AND PAMPHLETS RECEIVED.

The Comparative Anatomy of the Domestic Animals. By A. Chauveau. Second Edition. Translated by George Fleming, F.R.C.S. With 450 Illustrations. New York: D. Appleton & Co. 1873. Pp. 957. For sale by A. Williams & Co.

The Function of the Eustachian Tube. By Thos. F. Rumbold, M.D., St. Louis. 1873. Pp. 40.

Description of New Instruments for making Examinations of the Cavities of the Nose, Throat and Ear. By Thos. F. Rumbold, M.D. (Reprinted from the St. Louis Medical Archives and St. Louis Medical and Surgical Journal.) 1873. Pp. 16.

The Mortality Experience of American Millionaires. By Nathan Willey. (Republished from the Insurance Monitor.) 1873. Pp. 11.

Annual Report of the Board of Health of Philadelphia for 1872. Pp. 135.

On the Granular Cell found in Ovarian Fluid. By T. M. Drysdale, M.D. (From the Transactions of the American Medical Association.) Philadelphia. 1873. Pp. 8.

North End Mission Magazine for October.

Boston Medical and Surgical Journal.

Boston: Thursday, November 27, 1873.

The Coroner's jury in the case of Mrs. Crie met on Nov. 19th and heard the remainder of the evidence. Mrs. Lee, a friend of the deceased, testified that, two days before her death, the latter appeared in excellent health, that she had never known her to complain of trouble in her heart, that she dressed loosely, and was not then nursing her child. Mrs. Sawyer was then called. She repeated very closely Dr. Eastham's account of the events preceding the inhalation, and of such efforts at resuscitation as she witnessed. She thought the deceased was laced very tightly. She advised her to take gas, because she had herself recovered from it very nicely, and previously had taken ether and felt it for two weeks.

Question. Are you sure it was ether? *Answer.* It was ether and chloroform.

Q. Did Mrs. Crie insist on taking ether, or did she say something about chloroform. *A.* She said ether.

Dr. G. H. B. Flagg.

Dr. G. H. B. Flagg is a dentist in Boston. He was in Dr. Eastham's room while Mrs. Crie was dying. He felt her pulse; it was very slow, not more than twenty-five, and feeble, and to him it was apparent that she could not live.

Q. Have you been in the habit of giving chloroform yourself? *A.* No, sir.

Q. Either purely or combined with ether? *A.* Four times in the last ten years I have given a mixture of chloroform and ether.

Dr. Flagg said that he preferred not to give chloroform, but did not know enough about it to say it was dangerous.

Q. Were you in the habit of giving gas to Dr. Eastham's patients? *A.* I usually assisted him.

Q. And he has given ether to your patients? *A.* Four times, sir, during the last ten years.

Q. Then when you stated you had administered chloroform, you meant it had been administered by Dr. Eastham? *A.* Yes, sir.

Q. You knew it was the mixture of chloroform and ether? *A.* Yes, sir.

Dr. H. D. Osgood.

Q. You are a practising dentist? *A.* Yes, sir.

Q. You were called into Dr. Eastham's office between eleven and twelve o'clock on Monday, Nov. 10th? *A.* Yes, sir.

Q. Will you state to the jury what you saw there? *A.* Mrs. Sawyer came into my room at that time and said that Dr. Eastham wanted to see me, for a lady who had taken ether had fainted.

Q. Did she mean ether, or chloroform, or a mixture? *A*. I don't know; she said ether. I went into his office, and saw a lady in the operating chair.

Q. What was her position? *A*. She was inclined forwards. She seemed very low. I examined her pulse, and could not detect any at all.

Q. Did you detect any respiration? *A*. No, sir, I did not. Examining her clothing, I found she had on corsets, and that they were quite tightly laced. We applied ammonia and water, and Dr. Eastham slapped her face vigorously with a towel.

Q. Did she at all revive in any way? *A*. Not to my knowledge.

Q. You could not feel any pulse or detect respiration. Do you think she was dead? *A*. It was my opinion that she was dead.

Q. That was when you first went in, soon after Mrs. Sawyer called you? *A*. Yes, sir.

Q. Dr. Osgood, you have been for a long time practising dentistry? *A*. Yes, sir.

Q. You have been in the habit of giving ether? *A*. Yes, sir.

Q. Have you been in the habit of giving ether and chloroform? *A*. Yes, sir.

Q. Do you consider, from the experience you have had in the use of it, that chloroform is safe, either alone or combined with ether or alcohol? *A*. I consider it so, or I should not have used it.

Q. Do you give it alone? *A*. Yes, sir, I have done so many times.

Q. Have you given the mixture? *A*. Yes, sir.

Q. In what proportions? *A*. One-third chloroform and two-thirds ether.

Q. Has Dr. Eastham given it for you? *A*. Yes, sir.

Q. You always knew it was ether and chloroform? *A*. Yes, sir.

Q. Did the patient know it? *A*. I could not say.

Q. What did they call for? *A*. I don't know, sir.

Q. They must have required an anæsthetic or you would not have given it. *A*. True.

Q. Did they call it an anæsthetic? *A*. No, sir.

Q. What did they ask for? *A*. I cannot tell, sir. I think quite likely they called for ether.

Q. Did they ever call for chloroform? *A*. Yes, sir, very often.

Q. When they called for chloroform, did you give them the mixture? *A*. I may not have given them either, but the gas instead. We never give ether or chloroform when we can get them to inhale gas instead. Sometimes, one demands either ether or chloroform, and then we give it to him.

Q. You give the mixture when they call for the ether or chloroform? *A*. Yes, sir.

Q. Have you ever seen any ill effects from ether and chloroform mixed? *A*. No, sir.

Q. The uniform strength has been about one-third chloroform? *A*. Yes, sir.

Q. By weight? *A*. No, sir, by bulk. I never considered it a very great matter whether one-third, a little more or a little less.

Q. Do you give anæsthetics now as much as you did ten years ago? *A*. Do you mean ether, and chloroform and nitrous oxide?

Q. Yes. *A*. I do a great deal more.

Q. Is the use of ether and chloroform on the increase or decrease with you? *A.* I don't give as much as I formerly did.

Dr. E. S. Wood.

Dr. E. S. Wood, acting professor of chemistry at the Harvard Medical School, gave the following account of his analysis.

I received a small, glass-stoppered vial containing liquid; a portion of a liver, a spleen and kidney, and the contents of a stomach. The vial contained 1·39 ounces. The odor of the liquid resembled that of ether mixed with chloroform, the odor of chloroform being strongly perceptible. The specific gravity of the fluid = 1·043, which corresponds to that of a mixture of six parts by bulk of ether with four of chloroform, if allowance be made for an increase in the density of the two when mixed. A mixture of sixty per cent. of ether with forty of chloroform had a specific gravity of exactly 1·043 at 68 degrees Fahr., and had lost about $\frac{1}{100}$ of its volume. A mixture of sixty parts ether with forty chloroform will not occupy one hundred parts by volume, but only 98·945 parts, and its specific gravity, instead of being 1·032, as if no condensation took place, will be 1·043. The mixture contained no hydrochloric or acetic acids and no chlorine, showing that both the ether and chloroform were free from any deleterious impurity, a small amount of alcohol only existing as an impurity. The liquid answered the tests both for chloroform and ether. By bulk, it was sixty per cent. ether and forty per cent. chloroform, and by weight 58·14 per cent. ether and 41·86 per cent. chloroform. The blood had no odor, either of chloroform or ether, and neither of these liquids was detected by analysis; and the same is true of the organs, which were carefully analyzed.

Q. You are somewhat familiar with statistics of anæsthetics, are you not? *A.* I have seen some statistics.

Q. Have you it in your power to tell the jury the statistics relative to the mortality occasioned by the use of ether or chloroform, or a mixture of the two? *A.* The only statistics which I have seen were some which were published in Chicago in 1870, and these were reprinted, or rather copied into the last annual report on the practice of pharmacy and toxicology.

Q. Will you please state what these were? *A.* Roughly, the proportion of deaths to cases in ether was one in twenty-five thousand; to cases in chloroform, one in twenty-five hundred; to cases of a mixture of chloroform and ether, about one in five thousand.

Q. If you had been handed all the articles, without the chloroform and ether, could you have given any opinion as to the cause of the person's death? *A.* No, sir.

Q. Did I understand you that there were no odors in the blood? *A.* Yes, sir. The blood was strongly alkaline.

Q. What do you think is the smallest amount of chloroform that would cause death? *A.* The smallest reported, as I remember, was from fifteen to twenty drops by inhalation; one drachm taken by the mouth into the stomach, and one drachm of a mixture containing one part chloroform to four of ether by bulk, that is, one teaspoonful.

Q, You mean that dose has caused death? *A.* Yes, sir, immediately, that is within a few minutes.

Q. Is there any record of the presence of any poison in the blood of any of these cases reported? *A.* It has sometimes, but rarely, been possible to detect chloroform in the blood. The analyses after death from ether, in case of animals, have been unsatisfactory, and in case of death from chloroform it is only sometimes possible to detect it.

Q. Have you any idea of the cause of absence of coagulation in the blood? *A.* No, sir. The spectroscopic examination of the blood gave a normal appearance.

Dr. Henry J. Bigelow.

Q. You have heard the testimony in this case; you have it under oath that this lady had breathed from two to four drachms of a mixture of ether and chloroform such as you have heard stated; now what is your opinion as to the cause of death? *A.* She died of breathing chloroform; there is no question about it.

Q. You have no doubt that the chloroform which was used in that mixture was the cause of death? *A.* It was the cause of death.

Q. She took about two-fifths chloroform and three-fifths ether according to bulk; would that amount of ether be sufficient to cause death? *A.* It would not possibly cause death.

Q. Would it be safe for a child six years old? *A.* I cannot conceive that it would effect it deleteriously.

Q. Two-fifths chloroform? *A.* Might kill an adult.

Q. Have you ever in your experience known of any deaths by chloroform? *A.* I have been present at but one.

Q. You are familiar with the literature on that subject. From your reading, how many cases are you prepared to answer for? *A.* I am wholly unable to give a number. They are numbered by hundreds, and it is proved that many are not reported.

Q. Have you ever known of a case of death from ether properly administered? *A.* No, sir.

Q. Do you, from your own knowledge or by reading, believe there ever was a case of death from ether properly administered? *A.* There is a fallacy in the proposition put in that way. Ether is a powerful agent, and if a man is feeble or dying, it would contribute to his death like a dose of opium or anything else that has weight and force and power in it. But that is not the real question as between ether and chloroform, for both of them are powerful agents. The real question is, has chloroform, besides this narcotic power, some very poisonous influence which acts upon the system and in which it differs from ether; has chloroform such a power, has ether, or have both? I answer, chloroform has and ether has not; chloroform kills suddenly and ether cannot.

Dr. S. Cabot.

Q. As a result of your experience, do you think it dangerous in any way to give ether by inhalation? *A.* I don't, sir, with, of course, proper precautions.

Q. From your knowledge and personal experience, do you consider it safe to give chloroform? *A.* No, sir, I do not.

Q. Even properly; with all precautions possible to be taken? *A.* I don't think it safe.

Q. Judging from your knowledge, what do you think caused the death of Mrs. Crie? *A.* Inhalation of chloroform.

Q. Do you think that two-fifths of a tablespoonful of chloroform, as taken by bulk, would be sufficient to produce that effect? *A.* I do, sir.

Q. In your judgment, can a person in ordinary good health take ether enough to produce death, say in the course of ten or fifteen minutes? *A.* No, sir.

Drs. Henry G. Clark, George H. Gay and R. M. Hodges testified to the same effect. On the next evening, the jury met again, and presented the following verdict:—

That Mary F. Crie came to her death on Monday, the 10th day of November, 1873, between eleven A.M. and one P.M., in the office of Dr. Charles Eastham, a dentist, No. 25 Tremont street, Boston, and that her death was caused by the inhalation of chloroform administered in a mixture of chloroform and ether by the said Dr. Eastham. The jury use this opportunity to caution the public against the inhalation of so dangerous an agent as chloroform for the production of insensibility to pain. In the opinion of the jury the inhalation of sulphuric ether is safe, while the inhalation of chloroform, either alone or mixed, is always attended with danger.

It was signed by Ezra Palmer, M.D., John A. Lamson, M.D., Geo. Fabyan, M.D., George Lotz, M.D., Thomas Restieaux and Thomas Doliver.

This case has attracted much attention, not only from the attempt made just after the accident to pass the death off as one from ether, but also, when it became evident that it was due to chloroform, from anxiety to see what would be the conclusions of a Boston jury. The verdict is all that could be desired, as it expresses emphatically the feeling of the profession, and we do not find fault that Dr. Eastham was spared the well-deserved censure which he must have expected. The misfortunes of the past should be remembered only as warnings for the future. The use of chloroform is least justifiable where ether is best known; there is less excuse for its use in America than in Europe, and least of all in this city. After this verdict, nothing but very exceptional circumstances will warrant its administration. It appears in the evidence that several dentists are in the habit of giving whichever anæsthetic they see fit, regardless of the request of the patient. We hope that this custom is not general, and would advise any who may persist in it not to be too sure that after another patient, who shall have asked for ether, has been killed by chloroform, the verdict may not contain, besides other disagreeable words, the adjective "criminal."

The recent importation of cholera into several of the ports of England has given conclusive evidence of the impossibility, in these days of rapid transit from one country to another, that quarantine regulations can accomplish the ends for which they were established. The speed of journeying from remote parts of Europe to England outruns the ordinary period of incubation of many of the infectious diseases, so that an individual may have contracted disease in some distant locality and yet give no evidence of his sickness till several days after his arrival in port. Of late, persons from Hamburg and Havre have entered England, as subsequent events proved, with the poison of cholera already received into their system, yet they travelled from one part of the island to another before the disease declared itself.

One of the medical journals (the *Lancet)*, in commenting on the above cases, states that no system of quarantine against Continental ports could be maintained in England, with any prospect of benefit, which did not provide for the entire cessation of all traffic for an indefinite period. "That any form of medical inspection of ships from infected ports can ever be carried out which will detect and stop cases of diarrhœa like that from which the sailor suffered who travelled from Havre to Liverpool by way of Southampton, is in the highest degree improbable. Even if it were possible to attempt such a restriction of commerce as would be needed to compass the end, the restriction would be futile, as one of its first consequences would be the development of a system of smuggling which would render the quarantine of no effect. In dealing with the importation of cholera by sea, our efforts must be limited, for all practical purposes, to stopping manifest cases of the disease."

In fact, the British authorities are finding just such obstacles in the way of the utility of quarantines as were pointed out by this Journal more than a year ago. We would call attention to articles on pages 200 and 221 of the issues of this Journal for September 19 and 26, 1872, concerning this subject.

We have been shown a private letter written by Dr. Bennett to one of his many medical friends here, in which he states it to be his intention to take up his future residence in Nice. Dr. Bennett has been induced to take this step by the present condition of his health which, we are pained to say, compels his removal to a warmer climate; and although he has not resigned his professorship in Edinburgh, his absence must necessarily involve the temporary surrender of his professional instruction and practice there. But what may be a misfortune to Dr. Bennett and a source of sincere sorrow and regret to the profession and a most extensive circle of patients and friends at home, will prove a real blessing to the multitudes of his travelling countrymen, as well as to the great tide of American invalids which every winter finds temporary rest in the most beautiful city of the south of France.

While we cordially sympathize, therefore, with our professional brother in his enforced exile, we congratulate the citizens of Nice upon this distinguished addition to the medical corps of their city.

Correspondence.

New Orleans, La., Nov. 4th, 1873.

Messrs. Editors,—The history of yellow fever in the Southern and Western States, during the present year, is worthy of careful consideration, and I propose to present to your Journal a few notes, which may possibly prove of interest to the future medical historian.

The yellow fever of 1873 has not confined its attacks to the sea-coast, but has committed its ravages at various points in the interior, as at Shreveport, Louisiana; Memphis, Tennessee; Marshall and Calvert, Texas; Montgomery and Pollard, Alabama; and Bainbridge, Georgia. The extension of the disease along the lines of travel has spread alarm and dismay, and brought prominently to the attention of cities and States the question of efficient quarantine upon lines of railroad as well as upon the great water courses.

We will present, in the first place,

Notes upon the Yellow Fever of 1873, in New Orleans.

Up to the week ending Nov. 2, 1873, *two hundred deaths* from yellow fever have been officially recorded by the Board of Health of New Orleans.

The following official memoranda, from the Mortuary Records of New Orleans, present the total mortality of the city from all causes, the total number of cases of yellow fever, and the total deaths from yellow fever and other fevers, recorded chiefly as malarial fevers, from the week ending July 6th to the week ending November 2d.

Memoranda from Mortuary Records of New Orleans, 1873.

For the week ending	Total Mortality, all causes.	Total Mortality, fevers other than yellow fever.	Total cases yellow fever.	Total Deaths; yellow fever.
July 6th,	163	11	1	0
July 13th,	200	32	2	1
July 20th,	144	13	0	1
July 27th,	128	6	1	1
August 3d,	138	9	5	0
August 10th,	128	13	6	3
August 17th,	126	18	10	2
August 24th,	113	14	8	8
August 31st,	131	22	16	6
September 7th,	154	32	38	16
September 14th,	171	32	60	35
September 21st,	149	21	37	26
September 28th,	150	23	32	22
October 5th,	138	21	42	15
October 12th,	155	25	32	24
October 19th,	141	14	34	18
October 26th,	143	15	19	11
November 2d,	136	11	15	11
Total.	2608	332	368	200

The first case of yellow fever, officially reported, was traced to the bark Valparaiso, which arrived at Quarantine from Havana, June 16th, and, after remaining the usual period (during which time carbolic acid was poured into the pumps and freely scattered below in the forecastle, and the vessel twice fumigated with chlorine), she was permitted to proceed up the Mississippi River to New Orleans. As the ship was in ballast, it is said to have been easy to scatter the carbolic acid freely and thoroughly. Ventilation in the body of the ship is said to have been promoted by the measures instituted.

On the 4th of July, the mate of the Valparaiso (at that time lying at the head of Third St.) was taken sick with yellow fever, and was conveyed to the house of a friend on Moreau Street, near Spain, in the Third district, where he died on the 8th, having had black vomit prior to death.

The Valparaiso arrived in this port on the 26th of June; the mate of the vessel, who was a native of Spain, aged 18, and unacclimated, was therefore seized with yellow fever on the ninth day after arriving in New Orleans, and on the twentieth day after leaving the port of Havana.

The bed, bedding and clothing of this patient, after his death, were burned, and the house was fumigated with carbolic acid.

After the patient had left the Valparaiso, her cabin was disinfected with carbolic acid atomized, and her hold fumigated with chlorine.

The second case (H. W., aged 28, native of Alabama) was taken sick on board the dredge boat Essayons, at the mouth of the Mississippi River, on the 10th of July, and died on the 15th, at the Charity Hospital. This patient had been residing in New Orleans, and on the 8th of July went to the Passes, and worked on the United States dredge boat; he was therefore taken sick only two days after commencing work, and left the city four days after the first case occurred on the Valparaiso.

The third case was Edward H., mate on the steamer Belle Lee, taken sick July 12th; died on the 20th. The steamer Belle Lee lay three hundred yards from the Valparaiso, undergoing repairs. It is not known that this patient had ever visited the Valparaiso, or had any connection with her crew.

The fourth case occurred in my private practice. The following is an outline of this interesting case.

Mrs. W., residing at 230 Common Street, has lived in New Orleans eighteen months; large, well-developed woman, with clear complexion and high color in health. Mrs. W. called at my office, July 21st, stating that she had just passed through the menstrual period, which had been protracted for ten days, was very profuse, and confined her to bed. She complained of great weakness, " heaviness " of feeling, vertigo and pain in the head, back and limbs, symptoms which appeared to be attributable, at least in part, to the hæmorrhage, as I have attended her upon previous occasions when suffering from analogous symptoms, resulting from profuse hæmorrhage in menstruation.

July 22d, 1 P.M.—I was called to Mrs. W., and found her suffering with slight febrile excitement; pulse 90, full and strong; face flushed, pain in head, back and limbs.

July 23d, 9 A.M.—Face greatly flushed and of scarlet hue; capillaries of the extremities and face and surface generally, congested; patient greatly agitated, and alarmed; says that she has yellow fever, and will surely die. It was difficult, if not impossible, to calm her fears. Skin warm, but bathed in profuse perspiration; pulse 108, full and strong; great pain in back and head. 3.30 P.M.—Pulse 110; temperature 103.50°; urine abundant, light yellow, slightly tinted, from presence of vesical and vaginal mucus; a trace of albumen. Menstrual flow returned for an hour or two during the morning, but ceased again; tongue red at tip and edges, furred in centre.

July 24th, 9 A.M.—Pulse 118; respiration 30; temperature 106.8° F.; skin hot and dry. The fever rose in the evening; patient talked and muttered in her sleep, and frequently awoke suddenly with a start and cry; moans and sighs with every breath; is greatly agitated and alarmed. Pain in head, back and limbs intense; nausea constant and distressing, but no vomiting; heavy, disagreeable odor emitted by the body, as in yellow fever; an eruption has appeared upon the forehead; the surface of the face, trunk and extremities is as highly injected, and as red as in scarlet fever or measles, but the brilliant redness is more uniformly diffused over the surface than in either of these diseases. Tongue coated in centre, with yellow fur, and red at tip and edges, swollen, moist and soft, with margins indented by the teeth.

July 25th, 10 A.M.—Condition unchanged; pulse 118, full and strong; respiration 36; temperature 108° F. The delirium and restlessness of the patient prevented the thermometer being held firmly in the axilla; the actual temperature was therefore somewhat above 108°, and probably reached from 110° to 113° in the cavities of the heart. Two hours after the preceding observation, I was summoned to the bed-side of the patient, and found her *in articulo mortis;* pupils contracted; spasmodic respiration, with death-rattle in throat. I was informed that she had started suddenly in a disturbed sleep, made small ineffectual efforts to vomit, and passed immediately into this state. She was unable to swallow. Sinapisms were freely applied, but without effect.

In the last moments of life, the scarlet flush of the surface gradually faded, and at the moment of death, which occurred at 1 o'clock, P.M., the surface presented a yellow, jaundiced hue; after death, body mottled; decomposition rapid.

I attributed the sudden death of this patient to the high degree of heat and the consequent disorganization of the blood, and derangement of the nervous and muscular forces, consequent upon the action of the febrile poison.

It is worthy of note that the preceding case of yellow fever was developed sixteen days after the mate of the Valparaiso was attacked, and that the patient was confined to her room for a period of nearly three weeks preceding the fatal disease, and her residence was at least half a mile from the Mississippi river, and about two miles from the head of Third street, where the bark lay.

After careful investigation, I could find no evidence whatever that this patient had received the infection from any imported or foreign cause, and I regarded the disease as having originated *de novo;* in other words, that this was truly a sporadic case, originating in New Orleans. None of the inmates of the house had been previously sick with any fever, and no case occurred subsequently at this locality.

Fifth case, J. M., carpenter on steamer Pike, which was undergoing repairs about 30 yards from the steamer Belle Lee; attacked July 27th; recovered.

Sixth case, J. D., employed in loading bark Valparaiso; taken sick July 29th; recovered.

Seventh case, S. G., taken sick July 31st; died August 4th.

Eighth case, J. E. K., taken sick July 30th, on steamer Pike; recovered.

Ninth case, J. S. had been in New Orleans about four months and worked in the sun about one hundred yards from the Belle Lee; taken sick August 1st; died August 5th.

Tenth case, C. M., taken sick on steamer Pike, July 29th; died August 7th.

Eleventh case, C. H., seized on the 8th of August; died on the 14th; had been engaged in painting the Belle Lee.

Twelfth case, S. M., Aug. 9th; died Aug. 15th.

Thirteenth case, Chinaman, died at Charity Hospital, Aug. 15th.

Fourteenth case, C., 187 Rosseau, seized Aug. 15th; recovered.

Fifteenth case, J. O. D., taken sick at residence, Aug. 15th; died August 19th.

Sixteenth case, J. P., died in Charity Hospital Aug. 21st.

Seventeenth case, J. R., seized August 17th; died August 19; had nursed case 15.

Eighteenth case, J. J. H. died Aug. 22; had visited steamer Pike.

It is evident from the preceding records of the Board of Health, that the majority of the first cases appear to have contracted the disease in the same locality of the city. It is also worthy of note that in 1870, yellow fever was confined to a portion of the city four by twelve blocks wide and deep in the second district of the city, and to a locality three by six blocks wide and deep in first district; in 1871-2, the disease was limited to portions of the fourth district, contiguous to, if not embracing, the locality where it first appeared in 1873. There are no facts to show that the yellow fever of 1872 was imported; the evidence, on the other hand, goes to show that in this year, at least, it originated in New Orleans.

Whilst for a time the disease appeared to be localized, *sporadic* cases have occurred in various portions of the city, and across the river in Algiers. In my private practice, I have attended cases on Common street, Russian street, Girard street, Dauphin street, St. Charles street, and in Algiers.

. The relative mortality, as reported by the Board of Health, is certainly very great; viz. 200 deaths in 368 cases; 54.5 per cent., or one death in 1.84 cases.

It is probable that the actual number of cases has been much larger; it is also probable that a number of deaths, referred to the various forms of malarial fever, were in reality caused by yellow fever. If the total number of cases of yellow fever have not been fully and accurately reported to the Board of Health, the failure may be referred to two causes:

1st. To the great prevalence of dengue, and the failure in many cases to distinguish the milder cases of yellow fever from this disease.

2d. To the decided opposition of many to the measures of disinfection practised by the Board of Health. The opinion is held by many that the carbolic acid so abundantly used as a "*disinfectant*," not only has no effect in arresting or eradicating the disease, but also acts injuriously upon the sick in those localities where it is fully employed. I do not propose to discuss the question of the arrest or prevention of yellow fever by sanitary measures upon this occasion.

The fact that yellow fever has prevailed to so limited an extent during the past season has been explained upon the ground that the wide-spread epidemic of dengue pre-occupied the field, and that, in the almost total absence of emigration, there is comparatively but little material for the dissemination of the yellow fever in New Orleans.

In my next letter, I hope to present some observations illustrating the natural history of the disease. Respectfully, JOSEPH JONES, M.D.

The Hospitals.

MASSACHUSETTS GENERAL HOSPITAL.

(Saturday, November 22, 1873.)

OPERATIONS were performed in the following cases:—Fistula in Ano, Abscess of Thigh, Caries of great Trochanter, Disease of Knee-joint, Nasal Polypus, Stricture of the Urethra, Necrosis of Toe. On Wednesday, Dr. Bigelow operated for Ruptured Perinæum.

Fistula in Ano.—Dr. Cabot passed through the sinus a ligature, which was drawn firmly, tied and left to ulcerate.

Abscess.—Located in the lower third of the anterior part of the thigh, in a child. It was opened by Dr. Bigelow, and eight ounces of pus discharged. On exploration of the cavity, it was found to be unconnected with bone.

Caries.—In a patient with carious bone about the trochanter, the sinus was freely counter-opened, and the carious surface removed with a gouge by Dr. Cabot.

Disease of Knee-joint; Amputation.—Dr. Bigelow amputated just above the knee for disease of the joint. Before operating, he directed that the limb be tightly bandaged from the toes to the hip; after the tourniquet was applied, the bandage was removed. By this proceeding, the amputation was what might be termed a dry one; the blood which is commonly lost being saved to the patient. For twenty years, this practice has been followed at this hospital in amputations, excisions, necrosis and removal of tumors in both the upper and lower extremities, in short, wherever it was desirable to save the blood of a feeble patient, or to facilitate dissection, as in the removal of a needle from the hand. In alluding to this long-established practice, Dr. Bigelow remarked that this expedient is occupying at the present time considerable attention abroad, both of the surgical public and of the medical journals. He believed that Esmarch's modification of this compression, by the substitution of an elastic rubber bandage, would soon fall into disuse; first, because a common bandage is effectual; second, because the majority of amputations are done by practitioners to whom such a bandage is inaccessible; and, third, because the material loses its elasticity in a few months. The same remarks apply to the circular elastic compression of an artery, which has been repeatedly tried in this hospital. If one turn of an elastic bandage exercises a pound pressure, it is plain that twenty turns will compress with a force of twenty pounds. But a common tourniquet will do this, and the modification of Signorini's tourniquet habitually used in this hospital ensures, after removal of the compressing bandage, a dry amputation. This case also illustrated another point of current interest. The pulse being very much reduced by protracted disease, and the joint painful upon motion, exceptional care in etherization was needed as well for the patient's safety as his comfort. Instead of being brought to the etherizing room which adjoins the operating theatre, as is usual, the patient was carefully etherized in his bed before leaving the ward.

Nasal Polypus.—The patient with polypus of the left nostril had, also, a septum deviating to the right. Evulsion of the polypus was performed by Dr. Cabot.

Stricture of the Urethra.—In the case of an old man, and had followed a contusion received three months before. Perineal abscess was followed by a fistula through which all the urine had for six weeks been voided. The stricture in front of this fistula did not admit the smallest capillary bougie. A silver catheter was carefully forced through the stricture and passed into the bladder by Dr. Bigelow. The stricture was then dilated with Voillemier's instrument, and an elastic catheter left in the urethra.

Necrosis.—Dr. Cabot amputated the great toe for necrosis involving the second phalangeal joint.

Ruptured Perinæum.—A patient with ruptured perinæum, occurring during labor five months ago, had been unsuccessfully operated upon by her medical attendant, a month after confinement. The rupture of the sphincter was rather more than two inches in length. Dr. Bigelow commenced the operation by dilating or extending the sphincter ani, which was spasmodically contracted near the coccyx. The surface being refreshed, the rectal and the vaginal mucous membranes were respectively united by close silver stitches. Two deep wire sutures were now passed transversely through the centre of the denuded surface, drawn tight and held by small bullets at the distance of an inch or more from the wound upon each side. The cutaneous incision was stitched with wire. The patient's knees were to be kept together during treatment by a loose bandage. Dr. B. remarked that the swelling of the parts would probably require the removal of the two deep sutures in about three days, but a similar deep wire stitch would be placed in the perinæum for a few minutes, to support it during the first artificial evacuation of the bowels, under ether, about ten days hence.

H. H. A. Beach, M.D.

Medical Miscellany.

Dr. Clifton E. Wing, recently one of the house officers of the City Hospital, has been appointed house physician to the Women's Hospital, New York.

The *Philadelphia Medical Times* of Nov. 8th refers to two additional suppressed deaths from chloroform, occurring in the practice of a surgeon n that city.

Division of the Spinal Cord in the Neck *(Indian Medical Gazette*, September 1, 1873*)*.—N. B. Baillie records the case of a woman who lived for six hours after receiving a blow with a hatchet which cut through the third spinous process and the back part of the fourth cervical vertebra, dividing the spinal cord completely, and penetrating into the body of the vertebra in front of the spinal canal.—*Phil. Med. Times.*

THE PUBLIC BATHING DEPARTMENT.—The bathing houses have been moored off City Point, and several persons have been assigned to superintend them during the winter. There were seventeen bathing houses in use last year, twelve of which were for males and five for females. The number of bathers, last season, was as follows:—

June—Men, 74,783; boys, 235,171; women, 5242; girls, 30,718; total, 345,914. July—Men, 138,868; boys, 344,145; women, 16,900; girls, 56,616; total, 556,529. August—Men, 87,500; boys, 245,277; women, 11,717; girls, 39,686; total, 384,180. September—Men, 22,988; boys, 69,583; women, 2152; girls, 8580; total, 103,303. Grand total for the season, 1,389,926. Last year, the figures were as follows:—June, 336,573; July, 539,053; August, 537,042; September, 106,154. Total for 1872, 1,519,123. It will be seen that during the year 1873 there was an increase over 1872 in the months of June and July, and a decrease of about 150,000 in the month of August.—*Sunday Herald.*

THE DEATH FROM MORPHIA.—The magistrates have thought it right to commit for trial for manslaughter Surgeon-Major Macleod, who administered excessive doses of morphia to his wife, with the intention, as stated by himself, of procuring her a night's rest. Bail was accepted in the case. According to the papers, a larger quantity was given than was at first stated. The one grain not producing sleep, it is now stated that double that dose was given and repeated, and naturally it was fatal.—*Dublin Medical Press and Circular.*

THE Government of India have met for the purpose of organizing a system of relief in view of the threatened famine in that country.—*Dublin Med. Press and Circular.*

A NEW DESTROYER OF THE HAIR.—Under the above title, Dr. Bœttger, in the *Memorabilien*, says that we possess a new material for destruction of hair, of a most suitable description, in a mixture of one part of crystallized sulphydrate of sodium with three parts of fine carbonate of lime mixed and reduced to a very fine powder. This mixture may be kept any length of time without alteration in well-closed bottles. When moistened with a drop of water and laid by means of the back of a knife on the part of the skin covered with hair, we in a few minutes find the thickest hair turned into a soft mass, easily removed by means of water. If it remain on the part long it will cause a slight irritation of the skin.—*London Med. Record.*

DIED,—In this city, Nov. 17th, Dr. D. McB. Thaxter, aged 45 years.

MORTALITY IN MASSACHUSETTS.—*Deaths in sixteen Cities and Towns for the week ending November* 15, 1873.

Boston, 128—Charlestown, 10—Worcester, 16—Lowell, 20—Milford, 3—Chelsea, 9—Cambridge, 15—Salem, 11—Lawrence, 6—Springfield, 7—Lynn, 7—Fitchburg, 6—Newburyport, 3—Fall River, 30—Haverhill, 8—Pittsfield, 8. Total, 287.

Prevalent Diseases.—Consumption, 49—scarlet fever, 27—pneumonia, 23—typhoid fever, 19.

Of the deaths from scarlet fever, thirteen were in Boston and nine in Fall River.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, Nov. 22d, 132. Males, 63; females, 69. Accident, 5—abscess, 1—apoplexy, 2—inflammation of the bowels, 1—bronchitis, 5—disease of the brain, 4—cancer, 1—cerebro-spinal meningitis, 3—cholera infantum, 1—cyanosis, 1—consumption, 19—convulsions, 6—croup, 2—debility, 5—diarrhœa, 1—dropsy, 2—dropsy of the brain, 1—dysentery, 1—diphtheria, 1—epilepsy, 1—erysipelas, 1—exhaustion, 1—scarlet fever, 8—typhoid fever, 7—gastritis, 1—disease of the heart, 4—intemperance, 1—disease of the kidneys, 3—laryngitis, 1—congestion of the lungs, 3—inflammation of the lungs, 9—marasmus, 3—measles, 1—old age, 4—paralysis, 1—premature birth, 4—peritonitis, 2—poison, 1—puerperal disease, 3—rheumatism, 1—scrofula, 1—suicide, 3—tumor, 1—unknown, 5.

Under 5 years of age, 48—between 5 and 20 years, 13—between 20 and 40 years, 28—between 40 and 60 years, 23—over 60 years, 20. Born in the United States, 90—Ireland, 32—other places, 10.

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CONTRIBUTIONS TO PATHOLOGICAL PHYSIOLOGY.

By John P. Mettauer, M.D., LL.D.

The actions of the living body in a state of health are assumed to be in perfect equipoise, or so nearly so as to present no appreciable phenomena indicative of a departure from that condition. Slight and transitory deviations may, and doubtless do, take place, but not generally resulting in actual, or even apparent, disease. The nervous, vascular and muscular systems, as well as the organs of digestion, may experience undue activity or depression of their functional exercises without becoming diseased, either in function or structure, when the disturbance is of a transitory character.

How a diseased state differs from a healthy or normal condition, can be explained only rather conjecturally. They are both states of vital exercise of living organs; one tending to the support, perpetuation and present existence and development of the individual, while the other seems to war against those tendencies through a perverted or pathological state of the vito-physiological exercises, and fraught with disorganizing proclivities.

We can only conjecturally explain how morbific impressions induce disease in the living organism. By virtue of some quality or mode of action, induced by disturbing causes, the equilibrium and "beautiful balance of health is broken" and perverted; and the various functional exercises, designed for the nutrition, growth and preservation of the organism, become, sooner or later, more or less disturbed and irregular; which disturbances are ultimately followed by structural metamorphosis, in variable degrees of intensity as well as of form, and accompanied with phenomena of exceedingly diversified character. Intense perturbation of the living body has, in numerous instances, quieted down into a calm and well balanced state of the functional exercises without being followed by disease; yet, more frequently, the reverse is the case. Frequently, too, disease, or perverted vital action, occurs without the precursory existence of an apparent or known cause. And, in almost every instance, surgical operations and mechanical injuries are followed by such perversion of the functional exercises. These causes seem, as it were, to put the nervous system or the functional vitalities out of tune.

A liability to a diseased state of the living body has long been supposed to preëxist, and to depend upon morbific conditions stealthily induced in the organism of the affected individual, from the direct operation of external causes, or from congenital influences transmitted from parent to offspring. This liability, or predisposition, has never been analyzed so far as to enable investigators to determine its essential characters and pathological peculiarities. Enough, however, is known to remove all doubt as to the existence of such a condition; and it is established that it not only predisposes to, or invites disease, but also determines the type as well as the intensity of the character of the resulting disease. Whether a predisposing state invariably precedes an attack of disease is not certainly known, and very probably never will be positively determined; yet it seems reasonable to suppose that, in many instances, diseases occur without preëxisting predisposition, the exciting causes seeming to act also as predisposing.

Once established, predisposition may endure for an indefinite period, and possess every conceivable variety of morbid impressibility, as well as of intensity. It is not invariably followed by disease, nor does it always manifest itself by symptoms of striking or even of diagnostic characters.

It is not determined that a predisposing state of the economy is, in truth, a pathological condition, or that it is not the initial or first stage of a disease. That it is a morbid condition is exceedingly probable, and, as already stated, examples have occurred in which supposed states of predisposition have not been followed by disease. Whether a pathological condition or not, it seems to invite diseased action, and, as previously intimated, determines the type of the resulting disease.

The causes of disease, which are both predisposing and exciting, act very differently upon the living organism, and very probably this diversity is due, in some degree, to the great dissimilarity of structure of the body. How these causes act can only be conjectured; but the most rational view seems to favor the opinion that they operate primarily, if not chiefly, as nervous irritants, and that they first disturb sentient vitality in its normal relations with functional exercises, resulting in morbid or abnormal nutrition, manifested by the various mutations of structure and perversions of function, universally attendant upon a diseased state of the body. Each cause acts after its own peculiar manner, and, as already intimated, the organism reacting may influence the resulting product. Causes, too, act by preference, or by morbid affinity, upon certain structures or organs in the production of predisposition to disease. Disease is the morbid condition which supervenes upon the predisposing state, and appears under a countless variety of forms, and of every conceivable grade of intensity of morbid action.

The actions of the living body in health and disease are vital movements of the organism, one tending to the nourishment and support of the individual, while the other as constantly counteracts those tendencies. Healthy action, in which there is a *quasi* well-balanced state of all the functional exercises of the diversified organism, differs from diseased, chiefly, in the equableness and regularity of its phenomena, and the comfort and general well-being of the individual. It is true this action is frequently exalted, in some instances considerably above the normal standard, from exercise, diffusible stimuli, and the like, but it retains the equable and well-balanced qualities characteristic of healthy excitement; and if there is any increase of vital force it is only temporary, and subsides with the actions inducing it. Morbid action, on the contrary, is characterized by more or less irregularity, both as to equableness and intensity, and impairs the comfort and general healthfulness of the economy in every conceivable degree of severity; but whether it is attended with exaltation of vital force, is a question undetermined.

Within the past twenty-five years, there has been a manifest change in the views of medical men, both in Europe and America, in relation to the nature of morbid action, particularly inflammation; and, at the present time, the belief is almost universally entertained, that this abnormal state consists in vital movements of the living organism of depressing character. This belief, to a certain extent, is true, but only so far as the diseased process tends to impair nutrition and disturb the physiological exercises. Irritation might very properly be adopted as the best term by which to designate morbid actions, as it can be so made as to embrace every form of human disease, as a generic term, and the term imports a diseased or fretted and vexed state.

Morbid action, once established, perverts the secretory as well as the nutritive exercises, and very soon retrograde metamorphoses take place in the organism, constituting inflammation or inflammatory irritation. In this process, there is no positive increase of vital force, not even in the more acute forms of inflammation. It is true, some of the functional vitalities seem to have been exalted, especially sensibility, and that process upon which the generation of animal heat depends; yet these are morbid conditions, and may occur in opposite states of the system, and unattended with general augmentation of the vital energies.

Morbid action, whether of violent or moderate intensity, although consisting of perversion of the actions of health, is a vital process.

Inflammation, or morbid action, consisting in perversion of the nutritive exercises of the organism, must have its seat in the same structures, and be kept up by the same functional vitalities in their perverted condition, which rule in health. In truth, it is modified life, and, unquestionably, consists of new actions and products, which tend to the destruction of life instead of its preservation.

The diseased, or irritative action, is the true disease, the "*ipse* *morbus*," and the results, both in the form of change of structure and of the composition of the blood, as well as the engorgements and effusions, are the accidents supervening upon it but are not necessary attendants. Although generally present, there are instances occasionally met with in which they are absent. These results modify the inflammatory process, but are not necessary constituents of it.

Of the morbid results, engorgement of the implicated structures is perhaps the most striking and important, and possibly may be one of the earliest, if not the first pathological change of structural relationship of the organism. This condition very probably is the result of disturbed secretion, the blood accumulating in the capillary vessels by reason of such disturbance, together with the retained matters normally separated from it. At first, it exists chiefly as passive hyperæmia, but sooner or later acquires active qualities, which cause it to react upon the preëxisting circulation, and then it becomes an associate element of the inflammatory process. It is this engorgement, or hyperæmia, very probably, which, after putting on acute characters, causes infiltration of the inflamed structures, especially the escape of the white corpuscles into them, and thereby renders the process fully developed. Very soon, the capillary vessels, as well as those of supply, near the seat of inflammation, become enlarged, from the pressure of the blood, and this condition invites increasing affluxions of blood, as well as causes still farther engorgements. With the increasing congestion, the throbbing and undue heat of the affected parts, which early appear, progressively augment, accompanied with morbid sensibility, often pain, redness and swelling. The tumefaction of an inflamed part depends upon engorgements and infiltration into the structures permeated by the congested vessels; and very probably the infiltrating process is a form of morbid nutrition, especially as far as the escape of the leucocysts into the contiguous textures is concerned. The inflamed vessels, however, doubtless also contribute to the throbbing, by reason of their pulsatile efforts to remove the congestions, now painfully existing. The undue heat of inflammation, doubtless, is the result both of the accelerated circulation of supply and the detention of the abnormal quantity of blood in the affected part. Suspended or diminished secretion of the tegumentary or other covering of the part may also coöperate in the exaltation of temperature; and, possibly, a morbid evolution of heat may be one of the pathological elements of the inflammatory process; and increased redness may likewise be due to these conditions. Morbid sensibility and pain are the result of undue exaltation of sentient impressibility, but pain may be also caused by undue pressure, or overstretching of the structures of an inflamed part.

These last-named phenomena are the characteristic symptoms of inflammation as it ordinarily appears, and are due to the pathological changes, both of structure and function, which have taken place in the diseased part.

The perverted nutrition in this new state of existence is accompanied not only with the exudations, effusions and engorgements already alluded to, but with aberrations of circulation, or *error loci*, as Boerhaave termed it, in which red blood finds its way into vessels designed to contain and circulate colorless fluids in a normal state. That such aberrations do actually occur in inflammation, every experienced and observant surgeon will admit; and it is highly probable that they impart to the inflammation of the fibrous tissues the violent characters which usually distinguish them. They may also essentially influence the inflammatory process as it appears in the red-blood organs, as most, if not all of them, are composed of some form of white tissue in variable degree.

While the inflammatory process is to be regarded as a new form of vital existence, as has already been intimated, yet the living organs and the tissues in which the new actions occur are fundamentally the same which existed before the occurrence of the inflammation. The organism is, in many respects, more or less changed in its histological relations, but its elementary constituents are virtually the same as in a normal state. It is true the form of disease, in many instances, seems to disintegrate and change the original stamp; nevertheless, bone continues to be bone, nerve as nerve, muscle as muscle, &c. These two conditions once established, that is, functional aberration and structural change, react upon each other, and thus both perpetuate as well as aggravate the existing inflammation.

It has been intimated that morbid action, such as inflammation, is a devitalizing process, and that view is strongly supported by the numberless instances of its fatal termination, if other evidence was needed. That the process is disorganizing cannot be questioned; and, as it consists in perversion of the normal histological exercises which are based in the highest normal force, the maximum of vital action, it must represent an inferior grade which, very properly, should be termed devitalizing. John Hunter believed that inflammation might be reparative, and his adhesive description of it has found many advocates. What he termed adhesive inflammation was only temporary exaltation of the reparative exercises, and not inflammation. Every species of the inflammatory process is unfavorable to adhesion, is its antagonist and the surgeon's greatest operative enemy.

The increased amount of blood in an inflamed organ gives no evidence of augmented vital force; on the contrary, it indicates that the vital energies are impaired, and that such accumulations are due to the enfeebled state of the vessels, their walls being unable to resist the blood pressure. If normal vital force is truly the maximum of healthy action, it would be folly to suppose that it could be exalted beyond its maximum; and as the physiological exercises can only be maintained in such a state of the organs and the vital forces, all departures must represent a diminution, not increase of it.

From what is now known, inflammation is to be regarded both as a devitalizing and destructive process, in which the vital energies, as well as actions, represent a degraded condition of vital existence. An inflamed organ, it is true, maintains itself, but only by nutritive processes greatly variant from those of a healthy state of the organism; and this abnormal life, soon or later, terminates either in death by increasing disorganization, or in recovery, from gradual reëstablishment of the vital forces.

From the most enlightened view in which it can be contemplated, aided by the lights of an advanced pathology, inflammation, essentially, seems to be an arrest of normal nutrition and support of the organism, consisting of vital actions which maintain life in the tissues but entail upon them a perverted or abnormal existence. It is, as already intimated, virtually a new life, superinduced by morbific causes acting upon the economy. It takes the place of healthy nutrition, and establishes itself upon the perverted ruins of physiological life. In other words, it is morbid nutrition, due to perversion of the laws of the economy which supervise and control the exercises of health; and its actions are maintained by a degraded vitality, whose force varies much according to the circumstances which environ it.

A treatment of inflammation, deduced from its nature, as indicated in the brief summary of its constituent elements attempted in this paper, it seems to the writer, cannot be difficult of conception or adoption with well-informed and unprejudiced physicians. From the earliest periods of the history of medicine, the antiphlogistic method was generally adopted, and received almost the undivided sanction of the profession until within the past thirty-five years; but at the present time not only is the practice almost entirely abandoned, but in a great degree the term distinguishing the method has become obsolete. The enfeebling method, so long and so successfully employed, has been superseded by the supporting and invigorating; yet, with all of the pomp and ingenious theorizing of the latter, also the *quasi* support of the refinements of modern pathology, the new departure cannot compare with the antiphlogistic as to successful results. The enfeebling method, however successful it may have been, was, nevertheless, doubtless often improperly employed, as well as predicated upon erroneous conceptions as regards the pathological essence of inflammation, especially as relates to the employment of bloodletting. This remedy, like others of heroic potency, in many instances, has been injudiciously resorted to, both as regards applicability and energy, but when employed under proper circumstances no therapeutical agent known to the profession has been productive of more benefit and has done less injury. The writer has always been an advocate of depletory measures in the treatment of inflammation, and his long experience of more than forty years has not in the slightest degree impaired his confidence in them. Bloodletting is decidedly the most powerful of these measures, as it withdraws from the living body its *pabulum vitæ*, the sanguine nutritive fluid; while low temperature, or cold, ranks next in potency, by reason of its tendency also to remove from the economy its heat, another important and indispensable supporter of its vitalities as a nutrient. If the withholding of food is to be regarded as depletory, it is indirectly so, but ranks as an enfeebling agency of considerable power.

When bloodletting is used as a therapeutic agent in the treatment of inflammation, the chief object is to weaken the force of the general circulation, and at the same time to diminish the momentum of the currents of blood directed to the inflamed part, as well as in some degree the supply of blood. It may also lessen the amount of the pathological elements of the blood, which feed and prolong the inflammation, by reducing its quantity; and it doubtless tranquillizes and abates, in a degree, the general erethism. It is more especially suited to the early stages, while the process is developing itself, and the accompanying engorgements are acute. Good effects, however, follow from it often after the complete formation of the phlogosis, especially if the attendant symptoms are very acute. After attaining its complete development, it is questionable if blood should ever be detracted in inflammation. The process is now at its acme, or perhaps retrogressive; or tends to disorganizing metamorphoses of the tissues. There is no longer anything unsteady or fluxionary in the inflammation, which are the conditions most favorable for the immediate action of bloodletting.

It is not the intention of the writer to enter into the full treatment of inflammation, his object being chiefly to express his views as to the nature and pathological essence of the process, and the applicability of bloodletting in its treatment, as well as depleting measures generally. A volume would be required for a complete examination of so copious a subject, embracing as it does all human diseases.

Even in typhoidal or chlorotic conditions of the system, the abstraction of blood would be safe and proper if a vital organ of great delicacy should be the seat of inflammation. In some instances, no other therapeutical agent could possibly protect delicate and vital organs against disorganization. The belief that the abstraction of blood is improper and contra-indicated in subacute inflammation is not sustained by the experience of the writer. It would not be proper, nor will it be necessary, to bleed freely in such cases, but the remedy, judiciously employed, is not only a safe but often highly beneficial expedient. The bleeding should always impress the pulse, but not as decidedly as in pure inflammation. In phrenitis, pleuritis, peritonitis, and certain mucous inflammations, the most impressive bleedings will be required, and are generally well sustained.

That mercury acts as a valuable remedy in the treatment of inflammation will hardly be denied, and it is applicable to every variety and grade of the process. In the acute forms, its chief action seems to be that of a recurrent cathartic, and possibly it may also operate through the blood by lessening the amount of fibrin or other inflammatory constituents it may contain. In the subacute forms, its chief therapeutic action is that of a deobstruent, which, in other words, is a secernent or exciter of general secretions. The action of tartar emetic is very similar to that of mercury in these inflammations, and very probably the different preparations of iodine also.

Stimulants and tonics might be safely used in subacute inflammations, but in those of acute character are certainly contra-indicated. By accelerating the circulatory movements, they must of necessity augment the inflammatory process, which depends upon undue activity of the circulation. Even if they only maintain the existing morbid action, they may prove injurious. A moment's reflection will show that exciting measures must add to the danger of inflammation, as they certainly tend to augment as well as continue the actions upon which the process depends.

Food of highly nutritious qualities ranks with stimulants, and is improper in acute inflammation. Even in subacute forms of it, such food is of questionable safety. In the opinion of the writer, strongly nourishing and stimulating food should only be employed when digestion is vigorous and the organs executing it healthy. Strong, rich food can only be properly digested by strong and vigorous stomachs. To present such food to a weak or diseased stomach will be as likely to prove disastrous as to apply warm water to a frozen limb.

Worsham, Prince Edward Co., Virginia.

THE LATE M. NELATON.—The departed eminent surgeon has been the subject of accurate biographical notices, but their authors have not sufficiently insisted on the peculiar timidity and shyness which characterized his general demeanor, so much so that those who might have feared him as a competitor relied on this retiring disposition, and apprehended no rivalry, especially as he was known to have considerable property. But his success with Garibaldi and the favor of the Emperor worked wonders. It is a pity that the circumstance which gained him the Imperial Court drove a colleague of his into an asylum for the insane. Jobert (de Lamballe) had for some time secured the confidence of the Emperor when the Empress and her suite met with a carriage accident in Switzerland. The telegram sent to Paris said, "Let Jobert start at once, or, in his absence, Nélaton." Unfortunately for the former, he was out of town, and Nélaton went down to Switzerland. His services and his manner won the Empress; poor Jobert was supplanted, and he took the change to heart in such a manner that his mind became unhinged. Nélaton from that period rose with wonderful rapidity. He attended, some time afterwards, the Czar's son at Nice, his honorarium on that occasion amounting to £16,000.—*Lancet.*

Progress in Medicine.

REPORT ON DERMATOLOGY.

By James C. White, M.D.

Die Localization der Hautkrankheiten, histologisch und klinisch bearbeitet. Von Dr. Oscar Simon, Arzt in Berlin. Mit 5 Tafeln. Berlin: 1873. Pp. 163.

This is an attempt to explain the symmetrical and constant form of distribution of the eruptions upon the skin observed in certain diseases. On the back, these lines of localization are seen to run parallel with the ribs; next the spine, upwards; on the outer portions, downwards. On the neck and over the superior thoracic region, they converge from above outwards, from below inwards towards the sternum; on the inguinal region, they are parallel to Poupart's ligament; on the inner side of the thigh, parallel to the sartorius, &c. Similar lines might be given for other portions of the body. Such a chart, which is closely adhered to by the external manifestations of many cutaneous diseases, requires explanation, and Dr. Simon seeks this in the anatomical structure of the skin. He finds that the fibrous layer of the corium is arranged in definite directions, that the distribution of the papillæ is determined by the longitudinal trend of the fibrous bundles, that these in turn govern the arrangement of the natural furrows of the skin. In the same way, he thinks he traces a controlling influence upon the various glandular systems, and of the cutaneous vessels and nerves by this fibrous element, this skeleton of the skin. Having thus established a scheme of architecture for the skin in health, he would refer to the same the distribution and arrangement of the various forms of efflorescence in many cutaneous diseases.

There are, however, many causes for the peculiar localization of special diseases outside these natural laws, which are fully and thoroughly discussed in this interesting volume.

Des sueurs locales. Par Dr. F. Debrousse-Latour. Paris: 1873. Pp. 57.

The disorders of the sweat-glands have received less attention, perhaps, than those of any other organs and tissues of the skin. This treatise, although it adds little, if anything, to our previous knowledge of a mysterious class of affections, yet presents in a compact form a considerable amount of information, which has not hitherto been brought together. It contains chapters on excessive perspiration of the feet, of the axillæ, on éphidrose parotidienne, éphidrose palpébrale, on local perspiration following neuralgia, on unilateral forms of sweating, and on partial perspiration caused by disturbances of circulation. The author has little to say in explanation of the causes of these singular affections. The relations between some of them and disturbed innervation have been sufficiently demonstrated. With hyperæsthesia of the skin hyperidrosis seems to be in order, while with anæsthesia anidrosis is generally observed. This is readily understood when we consider that the supply of the blood to the capillary plexus surrounding the sweat-gland is regulated by the vaso-motor nerves, and that with hyperæsthesia there is hyperæmia and elevated temperature of the skin. The strange form of sweating from the skin overlying the parotid gland is explained by reflex action, a similar phenomenon to that of the perspiration upon other parts of the face when certain articles of food are placed upon the tongue.

The last two chapters of the monograph are upon hæmatidrosis, so-called, a rarely observed hæmorrhage from the sweat-ducts, and chromidrosis. There have been, no doubt, authentic cases of colored sweat, in which the chemical nature of the pigment has been found to be diverse, but many thus called have been cases of simulation, and some abnormal action of the sebaceous rather than of the sweat-glands.

Essai sur l'adénome sudoripaire.—Dr. Jourdan, as reported by Dr. Courtaux (*Annales de Dermat. et de Syph.*, Quatrième année, No. 6), describes in this essay certain tumors, the nature of which was not recognized before Verneuil's memoir appeared. He gives three varieties of hypertrophy of the sweat-glands. In the first, or "encysted," there is a stoppage somewhere along the duct, and the secretion collecting distends those parts least supported by the surrounding tissues. Other occlusions follow at different points along the canal, and in this way a series of cysts is formed, resembling a rosary, which contain a yellow, ropy, transparent fluid. Their walls are thick, fibrous, and resisting, and they are lined with extremely small cells of pavement epithelium. In the second variety, which he calls "general simple hypertrophy," the sweat canals present culs-de-sac, which at first, being simple dilatations, exhibit a varicose appearance. Gradually they enlarge independently, become isolated, and assume a tubular form. These tubes sometimes remain simple, but more generally they become themselves the axes of new offshoots, and upon them are formed in the same way other diverticula, at times so numerous as to resemble a lobulated gland. The epithelium within the culs-de-sac differs from the normal epithelium in quantity and character. There is at times a considerable proliferation, and the cells are of an elliptical form, and are arranged so that their long axes are perpendicular to the walls.

In the third variety, called "general hypertrophy with intermixture or infiltration of epidermal cells," there are found, as in the preceding, hypertrophied tubes with digitiform appendages, and culs-de-sac; but there also are present, in the glandular dilatations and in the newly-formed tubes, cells and epidermal balls. It is, in fact, only an advanced stage of alteration, and two, or all three of these forms may be met with in the same tumor. In size, adénome sudoripaire varies from a pea to an infant's head. When it has reached a medium stage of development, it may ulcerate and strongly resemble cancroid in appearance. Verneuil has pointed out, however, the following differences between these affections: In epithelioma, the borders of the ulceration present vegetations; in adenoma, they appear cut out with a punch. Sometimes lupus, chancre, and other ulcerations serve as starting-points of adenoma. When extirpated, the tumor is sometimes reproduced, the disease reäppearing in the sweat-glands adjoining the primitive tumor. The re-production is therefore by continuation, their alteration not having been sufficiently advanced at the time of operation to be recognized by the naked eye. Dr. Jourdan, in conclusion, is not far from admitting that adénome sudoripaire may transform itself into cancer.

The Variola-Varicella Question.—Kaposi (*Archiv für Dermat. und Syph.*, V. Jahr. Zweites Heft), in a long and important article, in which this much-vexed question is considered, with particular reference to the many points which have been put forward by those who maintain the duality or individuality of the two affections, draws from all the premises the conclusion that varicella, as a contagious affection, is identical with variola. In the same number will be found a report in full of a discussion of this question, which occupied several sessions of the Vienna Medical Society.

Peculiar Skin Disease in Children.—Uffelmann (*Archiv für klin. Med.*, in *N. Y. Med. Journal*, July, 1873) has observed a peculiar disease of the skin, affecting children by preference, very similar on appearance to erythema nodosum, usually having its seat in the lower extremities, but occasionally, also, on the arms. The disease manifests itself by round knots, in size from a pea to a pigeon's egg, which are situated in the subcutaneous connective tissue, are movable, and only tender on pressure, and are usually covered by reddened skin. They are aggregated or disseminated on the limbs according to the number of knots, from six to thirty. The portions of skin surrounding them are slightly swollen, without being œdematous or having increase of temperature. There is no inflammatory implication of the veins or lymphatics. The knots gradually disappear without local medication, not accompanied, however, as in erythema nodosum, by exfoliation of the epidermis or the greenish-yellow discoloration of the skin. The chief characteristic of the lesion is the severe constitutional disturbance which accompanies it. Without any marked febrile action (at most an elevation of one per cent.), there are marked pallidity of the face and of the visible mucous membranes, great muscular debility, an aversion to play, and much gastric disturbance. The author has always found a marked diminution of the red and considerable increase of the white blood-corpuscles. No important lesion of internal organs was found. After the disappearance of the knots, the characteristic symptoms of anæmia, which were well marked during the progress of the disease, remained for some time. The disease affects only delicate persons, and, according to Uffelmann's observations, without exception, those only with a tendency to hereditary phthisis, and the author does not hesitate to establish a connection between the two diseases. Syphilis could not be traced. Treatment consists in improving the constitution. Besides proper dietetic regulation, the preparations of iron are indicated.

Abortive Treatment of Furunculi.—According to several observers, as recorded in the French journals, the following method never fails "to take effect." As soon as there is perceived that characteristic redness, round in form and variable in size, with a culminating point in the centre, which, red at first, soon turns to a grayish-white, dip the finger into a little camphorated alcohol, and gently rub the suspected part, especially the middle; moisten the finger, and rub again in the same manner, eight or ten times for half a minute each time. After this friction, cover it lightly with the finger with camphorated olive oil. It is rare for a blind boil or furuncle, at the moment of lessening, to resist four applications of this kind. Often they have been seen to dry up and disappear after only one application.

Erysipèle scrofuleux.—Courbon (*Thèse de Paris*, 1873, in *Annales* *de Derm. et de Syph.*, Quatrième année, No. 5) has observed the following peculiarities, upon which he bases the individuality of the affection. It differs from ordinary surgical erysipelas in its non-contagiousness, its mildness, and its failure to locate itself about the borders of the sores which are so frequent in scrofulous persons. In addition to the fugitive and permanent forms, M. Courbon describes a recurrent form, consisting of a series of attacks, succeeding each other at very brief intervals (from one to five days), which is only met with among the scrofulous. Its seat is the face, the pharynx, and in a single instance (in nineteen observations) the auditory canal. Swelling of the glands always follows. The prognosis is favorable, even in cases where the beginning has been marked by violent delirium, and in those where albuminuria has been noticed to coëxist. It has also no effect upon the ulterior course of the scrofula.

Herpes labialis.—L' Union Médicale (Aug. 5, 1873) contains a report to the Société Médical des Hôpitaux, by Moutard-Martin, upon a long work of M. Lagout, of Aigueperse, on herpes labialis considered as an eruptive fever, with a normal evolution ending in cure, and an abnormal evolution ending in death, and occurring sometimes as an epidemic, sometimes sporadically. Lagout regards herpetic angina, not like other observers as a coincidence, but as a stage of herpes labialis, and also recognizes a herpetic pneumonia; both, according to his view, the manifestation upon the mucous membranes of the eruptive element during the fever of elimination of the herpes labialis. He presents the following propositions concerning the herpetic pneumonia:

1st. As Grisolle has observed, it is especially when the vesicular eruption appears upon the upper lip that the resolution of the pneumonia is most complete, or, according to himself, that the eruption has most surely accomplished its regular evolution.

2d. When the eruption shows itself about the wings of the nose, it appears incomplete, and in such cases the fever of elimination, at first insufficient, reappears with an intermittent type.

3d. When the eruption comes upon the lower lip, is small, of isolated vesicles, and without inflammatory vigor, the resolution of the herpetic pneumonia will be slower, and correspond rather to the type of *pneumonia with herpes*, if slowness or anomaly in course in an eruptive fever is enough to change the law.

4th. Herpetic angina and pneumonia, however grave they may be by the confluence of the eruption, always declare their origin by some stray vesicles upon the lips. One should always distrust the diagnostic significance of herpes without an efflorescence upon the lips.

5th. The period of the eruption upon the lips should be within a limited time, to constitute a regular eruptive fever; thirty-six hours for a simple herpes labialis, forty-eight to fifty hours for an anginous complication, four days for a pneumonia. The farther this period is extended, the graver and more to be feared will be the symptoms; ataxic, if the vesicular character remains unchanged, adynamic, if altered.

6th. The therapeutics of this eruptive fever are the same as in other fevers of the same character (expectant médecine).

7th. The complications may be irregularity in the fever, or the confluence of the eruption in the throat or lungs.

Pemphigus aigue fébrile.—Par M. HORAND, Chirurgien en chef désigné de l'Antiquaille (*Annales de Derm. et de Syph.* Quatrième année, No. 6). In this article, M. Horand describes two cases, in which the bullous eruption by the third day covered all parts of the body excepting the scalp. There were successive outbreaks of the efflorescence and fever. He is inclined to consider varicella, general herpes, and acute febrile pemphigus, not as distinct affections, but as simple varieties of herpetic fever.

Pemphigus.—Picot (*Jahresbericht Gesammten Medicin*, 1873, from *Gaz. des Hôp.*) strongly recommends the treatment introduced by Hillairet, and which resembles that for burns described in the last semi-annual report.* It consists in applying to the affected skin bandages soaked in a liniment of oil and lime water. In the two cases reported by him, the bullous eruption extended over nearly the whole body, and was accompanied by severe itching. The fever was considerable. Both patients were bound up from head to foot in wadding soaked in the preparation, which was daily changed. The general condition improved, the temperature sank without internal medication, and, later, the fever entirely disappeared. The excoriations arising from the bursting of the bullæ quickly dried, and healed in a short time. In one of the cases, no new bladders appeared after six weeks, while, in the other, perfect recovery only followed in two and a half months. In the latter case, a new eruption immediately followed a few days' interruption of the treatment. Hillairet has pursued this method for two years in eight or ten cases, and always with similar results. In two cases of pemphigus foliaceus it was less favorable.

Psoriasis; its relation to Rheumatism.—Dr. Satterlee, in the July number of the *Amer. Journal of Dermatology and Syphilis*, states that some two years since, he began to test the similarity of physical conditions present in these two diseases and to treat the former on the theory of an identity of the *materies morbi*, said *materies* being the product of imperfect oxidation of the "proteids." Without giving his argument for this theory, which is based mainly on undemonstrated chemical assumptions, the results of his practice are worthy of record. If, he says, we will regard psoriasis and rheumatism as produced by the same cause or condition of the system, namely, the result of the metamorphosis of an excess of nitrogenous substances, our treatment is readily suggested. Decrease the amount of nitrogenous food taken into the body, by restricting the diet, and give such remedies as will promote oxidation, so that the excess of nitrogenous material may be oxidized up to the point where it is easily eliminated from the body. In a chemical point of view, the alkaline salts constitute the most important principles promoting oxidation; even vegetable acids are converted in the system into carbonates for this purpose. The alkalies do not neutralize the uric acid, as was at one time supposed; but they prevent its formation to the extent which constitutes a *materies morbi*, by oxidizing it up to urea. Lemon juice, of which the chief constituent is citric acid, has likewise been shown to possess remarkable therapeutic properties in these as well as other affections. Large draughts of pure water act by oxidizing, "the water being decomposed, its hydrogen contributing to form ammonia, and its oxygen

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* JOURNAL, vol. lxviii. p. 602.

urea." The diet is restricted to vegetables and fruits, meats being forbidden. In this treatment the good effects are but slowly manifested. Two or three weeks sometimes pass before a change is noticed; then the eruption begins to pale and to scale less; this is followed by an improved general condition. The patient says that he feels better and stronger than he has done since the first appearance of the disease. The eruption takes a natural mode of subsidence, the spots changing into rings, by the appearance of healthy skin in the centre of each spot. These rings gradually break up into segments of circles, and then disappear, leaving a faint, pinkish stain on the skin, which, in turn, vanishes. The smaller spots (guttata) also disappear, some leaving transitory stains, and others none at all. When the patient is entirely well of the eruption, his general health is improved; he has often gained much in weight during the treatment; and I have yet to see, he says, a case where the disease has returned after the cessation of alkaline medicine, although I have maintained (but not so strictly as during the treatment) a general vegetable diet. Several times I have suspended the treatment, and allowed a return to a meat diet, with alcoholic stimulants, which was speedily followed by a retrogression in the cure. As psoriasis is essentially a chronic affection, requiring sometimes many years to cover the body, we cannot, of course, expect to speedily eradicate the disease. By this treatment, from one to six months may often be necessary to produce the desired result.

Psoriasis; *Treatment by Acetic Acid.*—Buck, in Lübeck (*Jahresbericht Gesammten Medicin*, 1873), recommends the following course: After the collections of epidermis have been removed by warm baths and a brush, a portion of the eruption is painted, in the beginning once a day, with the acetic acid by means of a large camel's-hair brush, and subsequently as often and energetically as the patient has the power and will to bear the pains which are soon felt. The place becomes white after the application, and swells up; the surrounding skin reddens and swells; and the patient complains of a burning sensation. The superficial cutaneous layer, at first softened, gradually dries into a horny covering, and, after a new epidermis has formed, is easily removed before a new cauterization, or falls spontaneously. If the application is repeated several times during the day upon the same spot, vesicular elevations or suppurative softening follows, by which the diseased parts are the more quickly cured. The painful sensation of burning generally ceases after a quarter of an hour, and any other injurious local or general effect upon the body, however many places are cauterized, is not observed. Persistent pain and more extensive swelling and redness of the vicinity will, of course, prevent the repetition of the application for a time, to any spot, but, after the hyperæmic and œdematous part has been relieved by evaporating-lotions, it may at once be used again, if necessary. This process is repeated once, twice, or even more times a day, according to the patient, until no reddened or elevated point covered with brawny, yellow scales, exists to indicate the return of the epidermal proliferation, and the skin remains smooth and natural; a cicatrix is never observed, although a darkening of the skin remains for some time and gradually fades away. The healthy surrounding skin of most patients is generally not affected by contact with the acid, an occasional burning and rubefacient effect only being produced, and a pretty sure sign that a part is permanently restored to a healthy condition is afforded when the application ceases to produce pain, or produces it in a less degree than at first. According to the number and size of the patches of eruption, and the strength and determination of the patient, the cure varies from four to eight weeks. When by confluence the efflorescence covers nearly the whole surface of the body, the acetic acid can scarcely, or at most only very gradually, be used.

(To be concluded.)

Boston Medical and Surgical Journal.

Boston: Thursday, December 4, 1873.

As showing the great need felt, by the officers of the Boston Dispensary, of a new building, the size of the old one being utterly inadequate for the growing needs of the city, the following extract from the Annual Report of the Superintendent is made :—

The number of new patients at the Central Office during the year ending September 30, 1873, was 17,366, of whom 13,219 were medical, and 4247 surgical. The medical patients comprised 3,761 men, 5,613 women, and 3,745 children; the surgical were divided into 1,688 men, 1,275 women, and 1,284 children. The district physicians were called upon to treat 9,982 new patients, viz., 2,012 men, 3,982 women and 4,078 children. The following results were reported by the several district physicians :—

Discharged, cured or relieved,	8835
Sent to hospitals, or removed from districts,	724
Died,	367
Under treatment,	150
	10,076
Under treatment at last annual report,	94
	9,982
Number of cases at Central Office,	17,366
Total number of new patients treated,	27,348
Total number of patients, new and old, treated during the year,	37,056
Number of cases of midwifery,	98
Number of recipes given,	51,359

Since July 1st, the various special departments of the Dispensary have been in full operation, with the following results for the quarter ending September 30th :—

Eye Department,	248
Nervous "	121
Skin "	440
Dental "	395

The number of patients constantly increasing, it is to be hoped that, before another year closes, a new and larger building, for which the plans have already been drawn, will be in the process of erection.

Cerebro-spinal Meningitis.—We would respectfully remind our correspondents that the time for returning the statistics in regard to the epidemic of the present year cannot longer be extended. It is very desirable that the information we are now attempting to collect be as full as possible, and we take this method of again calling the attention of our professional brethren to this point.

If any, therefore, have not already made their return, they are urged to do so without further delay. We can still furnish the blank forms for tabular statements, duly stamped and directed, if application is immediately made.

George Derby, M.D.
Sec. State Board of Health.

102 *Charles Street, Boston, Nov.* 20, 1873.

A new Rectal Bougie.—When attention first began to be directed towards anatomy, some two thousand years ago, the name *rectum* was given to the last portion of the intestine, from the mistaken notion, originating in the dissection of animals, that the canal was here straight. This error is perpetuated to this day by instrument makers, who continue to make all rectal bougies perfectly straight. Professor Edmund Andrews, of Chicago (*The Medical Examiner*, Nov. 1, 1873), demonstrates that these bougies fail to correspond to the cavity which they are intended to explore, for which reason they can rarely be inserted with any safety more than five inches, and are utterly worthless for any exploration beyond that length. He has, therefore, devised a new bougie, consisting of a smooth bulb of hard rubber riveted upon a somewhat flexible staff of metal, to the other end of which is attached an ebony handle. It is found that this instrument will often pass in ten or twelve inches without obstruction, and can be made to press on the abdominal walls from within, so as to be felt by the surgeon's hand within two inches of the umbilicus, an extent of exploration which no straight instrument can ever approach.

The Hospitals.

BOSTON CITY HOSPITAL.

Operations were performed last Friday, Nov. 28th, in the following cases:—

Phosphorus Necrosis of the Lower Jaw.—The patient was a man who had worked in a friction-match factory, about half the time in the dipping-room. The trouble with the jaw had been noticed about two months ago, commencing about the root of a carious molar tooth. The tooth was extracted; soon the disease invaded the alveolar process of the right side, and extended until, at present, the probe detected denuded bone as far backward as the angle of the jaw. The parts external to the bone appeared much swollen, but there was no sinus.

Dr. G. W. Gay performed excision of the diseased bone. The soft parts were divided along the lower margin of the jaw, the incision being curvilinear, and stopping short of wounding the facial nerve. The section of the bone was made with a chain-saw, just in front of the first molar tooth. In closing the wound, the ligatures were brought out at the corner of the mouth. The removed portion of the jaw was denuded of its periosteum, except at its summit.

Hip Disease.—Dr. Gay excised the head of the femur in a child of seven years, who had suffered from disease of the hip during an unknown period. Treatment by rest and extension had been faithfully tried without benefit. A large abscess had developed in the thigh, from which the pus had once been evacuated by the aspirator.

Dr. Gay made a V-shaped incision of the soft parts over the great trochanter, and, after disarticulating, removed the head of the bone by division of the surgical neck with a chain-saw, that section, he remarked, having been followed by better results, in the City Hospital cases, than that below the trochanter, in the shaft of the femur.

The head of the bone was denuded of its cartilage over most of its extent. The upper edge of the acetabulum was carious, and was removed with the gouge.

Necrosis of the Tibia.—The disease followed typhoid fever, and involved nearly the entire shaft. Dr. Fifield chiselled away the parts overlying the sequestrum, and removed as much of the latter as was loose. The free opening made in the bone gave sufficient exit to the products of the advancing disease, and tended to prevent the invasion of the epiphyses.

Correspondence.

YELLOW FEVER.

NEW ORLEANS, LA., Nov. 14th, 1873.

MESSRS. EDITORS,—In this communication, I will record some experiments upon living animals with the blood from the heart, and the black vomit from the stomach of a patient who died of yellow fever.

Experiment 1st.—With a small subcutaneous syringe, I injected beneath the skin of a healthy puppy (female dog) about thirty drops of the blood abstracted from the cavities of the yellow-fever heart, three hours after the death of the patient. No ill effects were observed, and the animal is at present strong and active.

Experiment 2d.—In like manner, I injected beneath the skin of an active Guinea-pig about the same quantity of the blood from the yellow-fever heart.

The next day, October 16th, the Guinea-pig appeared lively, and ate its food.

October 17th.—The animal is sluggish, and refuses food.

October 18th.—Animal feeble, moves with difficulty, and is evidently ill from the effects of the subcutaneous injection of yellow-fever blood.

October 19th, 5, A.M.—The Guinea-pig was dead, cold and stiff.

Post-mortem Examination.—Body emits a disagreeable odor. Cellular tissue of skin and surface discolored and greatly injected around the points of the injection of the yellow-fever blood. Cellular tissue and skin softened around the point of injection. Under the microscope, the blood and serous fluid from these portions of the cellular tissue were found to contain numerous bacteria and revolving animalculæ. Cavities of heart distended with dark, loosely coagulated blood. Blood corpuscles presented no special alteration; upon standing upon the glass side, however, crystals of hæmatin were rapidly formed. The dark blood from the cavities of the heart changed rapidly to the arterial hue, upon exposure to the atmosphere. Liver, dark colored and greatly congested. The microscope showed no accumulation of oil in the textures of the liver. Liver cells distinct, but pale. No bacteria or vegetable or animal organisms were observed in the blood of the heart, or in the blood of the structures of the liver.

Experiment 3d.—Into the subcutaneous tissue of a large, healthy and active male Guinea-pig, I injected about thirty drops of the black vomit, from the stomach of the yellow-fever patient, abstracted three hours after death.

The black vomit thus carefully injected into the cellular tissue of this animal, caused its death in six hours.

Post-mortem Examination.—Diffused redness, and great capillary congestion of the cellular tissue beneath the skin; congestion greatest in the immediate vicinity of the injection. Body emits a foul, putrid odor.

Immediately around the point where the hollow needle had penetrated, where the black vomit had been injected, dark blood had been effused, and the textures presented the appearance of those wounded and poisoned by the fang of the rattlesnake or of the American copperhead. The cavities of the heart were distended with dark, almost black, loosely coagulated blood. Liver, dark slate color and highly congested. Mucous membrane of stomach congested and punctated. No animalculæ, bacteria, fungi nor algæ were discovered upon microscopic examination of the blood from the cavities of the heart. Decomposition rapid; and, although the animal was examined almost immediately after death, the odor was disagreeable, and resembled that of the black vomit.

Experiment 4th.—I injected into the subcutaneous tissue of a large healthy female Guinea-pig about thirty drops of black vomit, which I had preserved, from a case of black vomit, ejected shortly before death, on the 9th of October. Death caused in six hours.

Post-mortem Examination.—Results similar in all respects to those recorded in the preceding experiment—intense injection in the cellular tissue, around locality of injection, of black vomit; no animalculæ, bacteria or vegetable organisms in the blood; putrefaction rapid and marked.

Experiment 5th.—I injected into the subcutaneous tissue of a Guinea-pig about thirty drops of putrid blood, which I had abstracted from the cavities of the heart of a subject who had died, on the 9th of October, in a "congestive" malarial chill. This blood had been preserved in a glass blottle in my laboratory for six days before this experiment. The case, as manifested by the symptoms and by the pathological changes, was undoubted malarial paroxysmal fever.

Death was caused by the putrid blood from the heart of the malarial fever case in eighty hours.

The preceding experiments are of importance in establishing the fact, that black vomit, taken from the stomach immediately after death, or ejected during life, in yellow fever, will, when injected into the subcutaneous tissue, produce as deadly and as rapidly fatal results as putrid blood.

We deduce the following practical conclusions from the preceding experiments:—

1st. Black vomit, when absorbed into the circulatory system, may act as a deadly septic poison.

2d. As the capillaries of the stomach, in yellow fever, are often ruptured, and the epithelium of the mucous membrane denuded, it is possible that, in some cases, the absorption of black vomit, especially after it has undergone putrefactive changes in the stomach, may be an important cause of the fatal issue in this disease.

3d. If remedies could be used which would prevent putrefactive changes in the black vomit whilst it is forming in the stomach of the yellow-fever patient and rendered innocuous, a certain proportion of cases might be rescued, even after the appearance of black vomit.

The preceding cases, experiments and reasoning, led me to employ, in the treatment of yellow fever, certain well-known antiseptic remedies.

Carbolic acid has been used by myself and others in the treatment of paroxysmal fever; but, from its caustic action on the mucous membranes, the readiness with which it loses its antiseptic properties by combining with albumen and fats, its nauseous taste, even when freely diluted, and its poisonous effects when administered in large doses, decided me not to use this agent, but to substitute one of its more stable compounds, which may be administered in large doses without producing toxic effects or inducing nausea.

It is well known that the sulpho-carbolate of sodium may be administered in large doses, and that the sulphur compound is eliminated by the kidneys and the carbolic acid chiefly by the lungs; and I determined to give this remedy as fair trial as opportunity might offer.

Respectfully, JOSEPH JONES, M.D.

STRASSBURG UNIVERSITY.

VIENNA, OCTOBER, 1873.

MESSRS. EDITORS,—Among the German universities, that recently established at Strassburg is well worthy the attention of any who may be looking forward to a somewhat prolonged stay in Europe; this because, unlike Vienna, *short practical courses* form a comparatively unimportant feature in the medical department in Strassburg, and a stay of a full semester, at least, is necessary to enable one to derive full benefit therefrom.

During the last semester, four Americans were in attendance, two of whom came, like myself, attracted by the names of the professors seen in the catalogue; the fourth came as a private pupil of Waldeyer, from Breslau, at the opening of the University, a year and a half ago. We, like the German students, were obliged to matriculate, a formality which opened to us the very large University reading-room and library, and was attended with no difficulty in taking up our connection with the University at any time we chose.

The medical faculty contains the names of Waldeyer, Recklinhausen, Lücke, Hoppe-Seyler, Leyden, Gusserow, all of whom are, I think, sufficiently well known to most of your readers to render a more elaborate introduction on my part unnecessary; for most Americans, Waldeyer and Recklinhausen are the chief attractions.

Prof. Waldeyer fills the chair of anatomy, and lectures on histology chiefly, the descriptive anatomy being attended to by an Elsassian formerly connected with the French Ecole de Médecine, the place of which the present medical faculty has taken.

Prof. Waldeyer has a large laboratory, divided into several rooms, capable of accommodating thirty pupils, each of whom has a separate table furnished with a lock-draw and the ordinary reagents and coloring fluids. A good microscope is furnished for the use of those who have none of their own. At one end of one of the rooms, is a set of shelves holding all the reagents of a complete chemical laboratory, and the preserving and more rarely used coloring and injecting fluids; in this same room, are other shelves holding dry and wet, injected and uninjected histological specimens for general use. Hand injecting apparatus, and an apparatus worked by a column of mercury are also here. In another separate room are kept the rabbits, doves, Guinea-pigs, frogs and lizards, which are furnished gratis to the most liberal extent. The work for the semester is systematically arranged beforehand, each week's work being written out and posted up in a conspicuous place in the laboratory. At the beginning of the week, the professor gives a lecture of two or three hours on the tissues to be examined during that week, writes down all formulas on the board, draws the macro- and microscopical appearances as illustrative of the lecture, and gives all the new ideas and their authors. For the rest of the week, the laboratory is open from 6, A.M., till 8, P.M., and students work when they please. The Professor goes about to each pupil at certain fixed times, at least four times daily, and gives every needful explanation and advice; he is aided by a competent assistant, who is always present when the Professor is otherwise engaged. Meanwhile, each one is encouraged to make and put up preparations for preservation and to make injections for himself; in this way, in one semester, one gets at least a tolerably clear idea of normal histology, and a capital drill in microscopical manipulation. Waldeyer has also other farther advanced pupils, who are making special studies, as of cancer, embryology, medulla oblongata, cerebrum, cerebellum. At present, he is paying much attention to embryology, a subject in which he is greatly interested, and to the knowledge of which he has contributed very much. The advantage of this laboratory is, that one has the *personal* instruction of one of the best and most celebrated microscopists in Germany at a very small cost and the *free* use of material, all of which one cannot have in Berlin and Vienna, and, I am told, also not in Bonn; in each of these latter places, the pupils are turned over to the first assistant, and at rare intervals have the advantage of personal intercourse with the professor himself, and at the same time each must prepare his own material.

Prof. Recklinghausen, who teaches pathology, has one assistant, draws his material from a public hospital of 800 beds, and has also specimens sent him from the surrounding country; he has places for eight or ten private pupils working up special subjects, to whom he gives a great deal of time; he lectures three hours daily, makes autopsies himself and works constantly. During the past semester, he gave a course on microscopical pathology of six hours a week, personally superintending, and aided by a competent assistant. He gave, also, a course on demonstrative pathological anatomy and physiology, similar to that of Prof. Virchow, of Berlin, and an hour's lecture, every afternoon, on special pathological anatomy and physiology. Each of these courses was systematic, and elaborately illustrated by microscopical specimens. On Monday mornings, three hours was devoted to the personal superintendence of autopsies done by the students. The material illustrating the demonstrative course is quite as abundant as one could wish, is fresh, and, after lectures, is free to the pupils, except, naturally, such specimens as are valuable for the museum. The pathological museum is very large, admirably arranged, perfectly free of access, and constantly used as illustrative of the lectures.

Lücke, Professor of Surgery, has large and well-filled wards, and lectures three hours daily; two hours devoted to an ambulatory clinic, very fully attended and equivalent to our Dispensaries and Out-Patient Department in the hospitals. An hour's lecture daily is given in the afternoon on General and Special Surgery; in the evening, the professor gives a course on Operative Surgery. Microscopical Surgical Pathology forms an important feature in the instruction.

Hoppe-Seyler, Professor of Materia Medica, has a large, well-arranged and well-attended laboratory in which students are constantly at work with free material.

Leyden, Professor of Clinical Medicine, pays attention especially to Nervous Diseases, and so is not so interesting to the general student.

Gusserow has an admirably arranged and well-filled Lying-in Hospital, and wards for Women's Diseases; he draws his material not alone from Strassburg, a town of about 80,000 inhabitants, but the whole of Elsass contributes to keep the wards full, as is also the case with the General Hospital. He gives a clinical course on Midwifery, very fully illustrated by plates, models and patients; personally superintends a course on Operative Midwifery; gives a systematic course of six hours a week on Women's Diseases, illustrated by Out-Patients and those from his wards, and gives a Touch Course in Midwifery of an hour every Monday afternoon.

A very good venereal clinic of six hours a week, with an out-patient department attached, is given by a privat docent.

The only drawback in Strassburg is the lack of sufficient instruction in children's diseases.

All the laboratories are very good indeed, and are well supplied.

For the student who wishes to work in general pathology, to work up any subject in special pathology or histology, there is at present no place in Germany so good as Strassburg. This is not alone my own conviction, but that of two of my fellow-students from America, who have been abroad already several years with this special object. I will also add that the two sons of Prof. Virchow have been students in the medical faculty since the beginning of the academical year, which fact might, perhaps, give weight to the above opinion. Respectfully,

ELBRIDGE G. CUTLER, M.D.

LETTER FROM BERKSHIRE.

PITTSFIELD, MASS., NOV. 5th, 1873.

MESSRS. EDITORS,—The Pittsfield Medical Association, after a summer's rest, has resumed its fortnightly meetings. The Association, since its organization, two years ago, has proved a decided success. It comprises the nine members of the Mass. Med. Society residing in Pittsfield; and its meetings are always well attended, seldom more than one or two being absent, and not infrequently every member being present. The meetings are held at the houses of the members, in rotation, and the exercises consist in free conversation and discussion upon medical topics, the report of cases, and the occasional reading of a paper. The supper, also, is a feature which all appreciate. The Association subscribes to the leading medical journals, whereby the profession in our town is kept brightened up intellectually; and, by free social intercourse, those petty jealousies, which too often impair the harmony of the profession, in the smaller places, being, in fact, the worst form of medical *kleinstadterei*, are happily avoided.

On Wednesday of last week, the Berkshire District Medical Society held its monthly meeting. These have been held regularly for many years, and with unflagging interest. Sometimes, it has been impossible to get a quorum together in August, the busiest month; but this year there has been no break. The attendance averages a dozen or fifteen members, which, for a hill-county, where the members are scattered, and the distances great, is doing pretty well. Some of the members come twenty-five miles, and nearly all, outside of Pittsfield, have to give up the entire day to the meeting. This is a sacrifice, which, to a country practitioner, is always difficult, and very often an absolute impossibility. Still, they come when they can, and, after a free discussion of cases and comparison of opinions, not to mention a social lunch (for we do nothing without eating, in Berkshire), we all feel wiser, happier and better-natured for having attended the meeting. The elder members are as prompt as the younger; and one of the most regular attendants is Dr. H. L. Sabin, who, in his 74th year, comes all the way from Williamstown, to give to the meetings the benefit of his ripe wisdom, and to enliven them with his perpetual and contagious youthfulness.

I believe that monthly meetings are not held in all of the counties, but should be glad to find this a mistaken impression. We consider them, here, a very valuable agent in keeping up with the times and maintaining a proper *esprit de corps*. It is especially important at this time, when charlatanism grows daily more bold and blatant, that the standard of the profession should be raised higher than ever, and that we should increase in respectability and moral weight as a body, by cultivating scientific knowledge, through the medium of constant study, and an honest comparison of our own methods with those of our brethren, and especially of those who are recognized as leaders of the profession. It is by thus maintaining an obvious superiority that we are to triumph over quackery, rather than by any hand-to-hand contest with men whose chief strength lies in their uncrupulousness.

Two months ago, our District Society followed to their last resting place the remains of the Rev. Dr. Todd, who, connected with the Society as an honorary member, had ever its best interests at heart, and was respected and beloved by all. The Society's resolutions of respect for his memory have been published in the JOURNAL. The disease which terminated his life was a typhlo-enteritis, with extensive ulceration, and, finally, perforation of the wall of the cæcum. The case will shortly be reported in full. He was first attacked on the 18th of May, but preached and spoke in public several times after this, when he would have been better in bed. When he officiated as chaplain at the Annual Meeting of the Massachusetts Medical Society, on June 4th, and made his vigorous after-dinner speech, which all will remember as abounding in wit and wisdom, he was suffering from constant and exhausting pain, which made the journey to Boston and back, and his efforts there, a veritable torture. When it is known that, for nearly twenty years, he had never had an operation of the bowels without the aid of an enema, that he had been a martyr to hæmorrhoids, and had also a double inguinal hernia, the vast amount of intellectual labor which he accomplished and the uniform cheerfulness he maintained are truly surprising.

Dr. Todd's ideas of recreation were remarkably sound. He was a pioneer in the custom in searching for rest and health in the wilderness. For the last thirty years of his life, he spent a part of every summer in the woods, either in the Adirondacks, or the forests of Maine, Nova Scotia or Canada. On reaching his camping-ground, he would spend the first day or two in almost unbroken sleep, extended beneath the pines, in whose balsamic fragrance he always delighted. Then he took his rifle, and entered with all his energies into the chase, returning to his parish, at the end of a few weeks, exuberant in vigor of body and mind. He never wearied of these expeditions, but said he never enjoyed the woods so much in his life as last autumn, when he penetrated the wilderness of Canada West, a hundred miles beyond the outposts of civilization. Most members of the medical profession think it impossible to leave their practice for a month every summer or fall, and scarcely any could spare the time or money to imitate Sir Henry Holland in his annual two months' journeyings; but if more would follow Dr. Todd's example, and become backwoodsmen for a short time every year, they would be the gainers for the sacrifice, in length of days, health, happiness and usefulness. BERKSHIRE.

THE USE OF THE GUM-LANCET.*

MESSRS. EDITORS,—Your ingenuous correspondent, "Gum-Lancet," in the JOURNAL of the 13th ult., asks for information on the subject of lancing gums.

1st. "Who cuts gums?" The present writer, with a respectable number of brother physicians, both at home and abroad.

2d. "Why does he do it?" On the same principle that a surgeon cuts for a bullet, a splinter, a piece of dead bone, a collection of pus or any other foreign body or substance imbedded in the tissues and tending to keep up inflammation and constitutional disturbance. The tooth to all intents is a foreign body, whose effort to work its way through the gum causes local inflammation, sympathetic fever and extreme nervous irritation, so distressing and so dangerous in a young child. It is a common belief that teething causes convulsions; why not, if the fever runs high enough, as well as any form of fever in childhood? I am sure I have seen such cases. What is the natural indication? To make a free opening for the escaping tooth, thereby abolishing the local irritation and with it the attendant train of constitutional symptoms. *A fortiori*, if the child is suffering at the same time from any other disease, might the operation be done as a means of diminishing every extraneous source of irritation.

3d. "Will anyone give us his personal experience of its advantages over the let-alone system, if it has any, and oblige, &c.?" As to anyone having a "*system*" for lancing gums, simply because a child happens to be teething, nothing could be more absurd. If there is no trouble, let him alone by all means. If, on the other hand, the gum is inflamed, with an undue amount of constitutional sympathy, I have often found it useful to cut it. Among the good effects I have witnessed are, a diminution of heat, fever, pain and nervous irritability, with a more rapid extrusion of the offending tooth; in complicated cases, the relief of convulsions and the alleviation of various acute diseases, especially those of the stomach and bowels. In many cases, no benefit whatever is experienced, but I never knew or heard of its doing harm in a single case.

Thanking your correspondent for the pleasurable opportunity thus afforded of obliging him, I remain Yours sincerely,

E. T. W.

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* We publish the above in preference to a very good and more elaborate letter on the subject, simply on account of its brevity.—EDS.

Medical Miscellany.

We reproduce, according to request, the following "pome" which appeared in our columns some fifteen years ago, credited to the *Detroit Tribune*. We hope that it may soften the hearts of "sextants" in the season of closed tabernacles and close air.

"A APPEEL FOR ARE TO THE SEXTANT OF THE OLD BRICK MEETINOUSE.

BY A. GASPER.

O sextant of the meetinhouse, which sweeps
And dusts, or is supposed to ! and makes fiers,
And lites the gass, and sometimes leaves a screw loose,
in which case it smells orful—worse than lamp-ile;
And wrings the Bel and toles it when men dyes
to the grief of survivin pardners, and sweeps pathes;
And for the servases gits $100 per annum,
Wich them that thinks deer, let em try it;
Getin up befoar starlite in all wethers and
Kindlin fiers when the wether is as cold
As zero, and like as not green wood for kindlers;
I wouldn't be hired to do it for no some—
But o sextant! there are 1 kermoddity
Wich's more than gold, wich doant cost nothin,
Worth more than anything exsep the Sole of Mann!
i mean pewer Are, sextant, i mean pewer Are!
O it is plenty out o dores, so plenty it doant no
What on airth to do with itself, but flys about
Scatterin leaves and blowin off men's hatts;
in short, its jest 'free as are' out dores.
But o sextant, in our church its scarce as piety,
scarce as bank bills when agints beg for misshuns,
Wich some say is purty often (taint nothin to me,
Wat I give aint nothin to nobody) but o sextant,
u shet 500 men, wimmen and children,
Speshally the latter, up in a tite place,
Some has bad breths, some aint 2 swete,
Some is fevery, some is scrofilus, some has bad teeth,
And some haint none, and some aint over clean;
But every 1 on em breethes in & out and out and in,
Say 50 times a minit, or 1 million and a half breths an our.
Now how long will a church ful of are last at that rate,
I ask you, say 15 minits, and then what's to be did?
Why then they must breathe it all over agin,
And then agin, and so on, till each has took it down
At least 10 times, and let it up agin, and wants more.
The same individible doant have the privelidge
of brethen his own air, and no ones else;
Each one must take watever comes to him;
O Sextant, doant you know our lungs is bellusses,
To blo the fier of life, and keep it from
goin out; and how can belluses blo without wind?
And aint wind *are?* i put it to your conschens.
Are is the same to us as milk to babies,
Or water is to fish, or pendlums to clox—
Or roots and airbs unto an injun Doctor,
Or little pills unto an omepath,
Or boys to gurls. Are is for us to brethe.
Wat signifies who preeches if I cant brethe ?

Wats Pol? Wats Pollus? to sinners who are ded?
Ded for want of breth; why sextant, when we dye
Its only cause we cant brethe no more—that's all.
And now, o sextant, let me beg of you
2 let a little are into our church.
(Pewer are is sertin proper for the pews)
And do it weak days and Sundays tew—
It aint much trouble—only make a hole
And the are will come in of itself;
(It luvs to come in whare it can get warm;)
And o how it will rouse the people up,
And sperrit up the preacher, and stop garps,
And yawns, and figgits, as effectooal
As wind on the dry Boans the Proffit tells of."

Glanders in a Woman.—A fatal case of *glanders* occurring in a woman is recorded in the *Irish Hospital Gazette* (Nov. 15, 1873). The disease was thought to have been contracted in the loft over a stable, where the woman had been forced to spend the night.

Extra-Uterine Pregnancy.—An interesting case of Extra-Uterine Pregnancy is reported by Dr. H. E. Woodbury in the *Phil. Med. Times* (Nov. 22, 1873). The patient, a woman aged 30, having expelled *per rectum* a fœtus of ten weeks, made a good recovery.

Poisoning by Hyoscyamus.—Edmund White, L.R.C.P., Edin., reports in the *London Lancet* for July, 1873, a case of poisoning by hyoscyamus. An ounce and a half of the tincture was taken, by mistake, for a black draught, about 5 o'clock in the morning. Heat of hands, pricking sensation in hands, feet and legs, came on in about ten minutes. Shortly after she was delirious. Purplish rash followed over whole body. Absolute loss of muscular power succeeded. The full effect of the poisoning seems to have been reached in about eleven hours. It was six days before she regained any use of the legs, and then could not stand without support on both sides.

Married,—In New York, 26th ult., at Grace Church, Dr. Henry Tuck, of Boston, to Emma R. Beers, of New York.

Died,—In Lowell, Nov. 28th, Dr. John W. Graves, aged 63.—In Topsham, Me., Nov. 23th, Dr. Joseph McKean, aged 76.—In St. Louis, Mo., Nov. 17th, Dr. Moses N. Hunt, only son of Dr. Eben Hunt, of Danversport, Mass.

Mortality in Massachusetts.—*Deaths in fifteen Cities and Towns for the week ending November 22, 1873.*

Boston, 132—Charlestown, 16—Worcester, 23—Lowell, 17—Milford, 1—Cambridge, 10—Salem, 12—Lawrence, 7—Springfield, 8—Lynn, 10—Fitchburg, 3—Newburyport, 7—Somerville, 6—Fall River, 28—Holyoke, 4. Total, 284.

Prevalent Diseases.—Consumption, 53—scarlet fever, 21—pneumonia, 21—typhoid fever, 15—croup and diphtheria, 10.

Of the deaths from scarlet fever, eight were in Boston and eight in Fall River.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, Nov. 29th, 151. Males, 78; females, 73. Accident, 5—abscess, 1—apoplexy, 3—disease of the bowels, 1—inflammation of the bowels, 1—disease of the brain, 2—bronchitis, 7—burned, 1—cancer, 3—cholera infantum, 1—consumption, 31—convulsions, 4—croup, 2—dropsy, 1—dropsy of the brain, 3—debility, 4—erysipelas, 2—fever, 1—scarlet fever, 9—typhoid fever, 4—bilious fever, 1—gout, 1—gastritis, 2—disease of the heart, 5—intemperance, 3—disease of the kidneys, 2—congestion of the lungs, 1—inflammation of the lungs, 16—marasmus, 8—measles, 1—old age, 3—paralysis, 3—pleurisy, 1—premature birth, 3—peritonitis, 1—purpura hæmorrhagica, 1—disease of the prostate, 1—puerperal diseases, 7—suicide, 1—ulcers, 1—whooping cough, 1—unknown, 3.

Under 5 years of age, 51—between 5 and 20 years, 19—between 20 and 40 years, 39—between 40 and 60 years, 18—over 60 years, 24. Born in the United States, 99—Ireland, 34—other places, 18.

THE

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Original Communications.

PANCREATINE AND ITS USEFULNESS.

By HORACE DOBELL, M.D.,

Senior Physician to the Royal Hospital for Diseases of the Chest, London.

HAVING for many years experimented with the pancreas, chemically, physiologically and therapeutically, and published numerous observations on the subject, I was much struck by an article in the "Boston Medical and Surgical Journal," June 26, 1873, entitled "Pancreatine and its Uselessness," by Dr. E. H. Hoskin.

In the *Lancet*, Sept. 10, 1864, I referred to the experiments made by myself with a view of learning whether the presence of the gastric juice in the stomach would interfere with the special properties of pancreatic juice; the result of those experiments being that "beef-fat emulsion made with pancreatic juice remained complete after standing two days mixed with pepsine, hydrochloric acid and water." My conclusions in this respect were confirmed, in 1869, by M. Chauvin and M. Morat, in a paper read before the Academy of Sciences of Paris. The results of their experiments showed that "the action of the pancreatic juice is not checked by the presence of gastric juice, or by hydrochloric acid, considerably diluted," and that, "in the digestion that ordinarily takes place in the stomach, the pancreatic juice preserves its energies intact, notwithstanding the presence of gastric juice, and may initiate in the interior of the stomach a complete digestion of the three species of alimentary substances; and they state that, in a clinical point of view, they have (as I had done before) obtained remarkable results, with the aid of pancreatic juice and extract." (*Lancet*, Oct. 1869.)

Again, I have demonstrated that the pancreatic juice in its fresh state may be either acid or alkaline, although nearly always acid soon after removal from the body, but that *its acidity or alkalinity has nothing to do with its property of emulsifying fat.* "The pancreas, in acting upon fat, does not decompose it into fatty acid and glycerine." (Proceedings of the Royal Society, No. 97, 1868, and *Lancet*, October, 1869.)

These conclusions having been arrived at by careful experiment and research, I was not a little surprised to find that Dr Hoskin had found completely different results from experiments which, at first sight, appeared to be carefully made. In the first place, he speaks of the "alkaline pancreas digestion" which I have proved to be a mistake, alkalinity forming no essential part of pancreatic digestion. But it is not of this that I wish first to speak, but of his major proposition, viz., "*that no good can be derived by the patient taking pancreatine or any of its glyceroles or other solutions, for in the stomach the pancreatine will be digested, as would any other nitrogenous matter.*"

Dr. Hoskin arrives at this conclusion from the results of two test experiments: in one of these, he digested a portion of fresh pancreas in water at a temperature of 100° Fahrenheit, and then made an emulsion by adding olive oil; in the other, he digested fresh pancreas in water at a temperature of 100° F., as before, but with the addition of some pepsine and hydrochloric acid; and in this case he found that on adding olive oil no emulsion could be made. Hence, it appeared to him, quite naturally, that the presence of pepsine and hydrochloric acid destroyed the emulsifying power of the pancreas. At first sight, this appears to be a fair conclusion from the experiments, but when we come to examine the exact *details of the experiments*, we arrive at a totally different opinion, viz., that the experiments and their results are utterly worthless. Both experiments are deprived of any value by the fact that he digested the pancreas, &c. *for seven hours.* I have proved (with the assistance of Mr. Julius Schweitzer, Fellow of the Chemical Society, who has for years aided me in my experiments on these subjects) that organic substances, such as pancreas, pepsine and pancreatine, cannot be exposed *for seven hours* to a temperature of 100° F. in water without undergoing decomposition and losing their natural properties and functions. Thus, in both of Dr. Hoskin's experiments, he destroyed the properties of his ingredients before he added the oil. It will be asked, then, how it was that he "emulsified" the olive oil with the first specimen of pancreas? The answer is that he was deceived in supposing that it was emulsified in the sense of a *pancreatic emulsion.* It is a very delicate point, upon which mistake is very easy to one not accustomed to operate upon fats with the pancreas. What Dr. Hoskin took for a pancreatic emulsion of oil was only a mechanical mixture of oil with the glutinous fluid produced by digesting pancreas for seven hours in water. Had he tried to emulsify solid fat, such as lard, he would have discovered his mistake, for he would have failed to make an emulsion at all. All experiments of this sort should be made with solid fat to be reliable, for any fluid oil is easily shaken together with water to form an emulsion; and if the water contains some glairy or mucilaginous matter, as in Dr. Hoskin's experiments, the mixing takes place more readily, and is more permanent. I have carefully repeated Dr. Hoskin's experiment, with lard instead of oil, and I find that at the end of the seven hours' digestion the emulsifying property of the pancreas is entirely, or almost entirely, destroyed. On the other hand, if the digestion of the pancreas is stopped at the third hour, the mixture will readily emulsify the lard; and this pancreatic emulsification is *not in the least interfered with if pepsine and hydrochloric acid are digested with the pancreas.*

Let Dr. Hoskin, or anyone who wishes to arrive at a sound conclusion on this important matter, perform the following experiment: Take half an ounce of fresh pancreas of the pig; 20 grains of Bullock's pure pepsinum porci; 8 drops of hydrochloric acid; 3 ounces of water. Mix the pancreas, lard and pepsine well together in a mortar, then add the water containing the 8 drops of hydrochloric acid. Digest for four hours, at a temperature of 100° F. At about the third hour, the pancreas and fat will be found to be all dissolved, forming a mixture which can be easily strained through muslin. From this mixture, the pure *pancreatized fat* may be subsequently separated by solution in ether, and will be found to mix readily with water, forming a *true pancreatic emulsion.* Unless the fat retains its property of mixing with water after solution in ether, it cannot be considered to have been properly pancreatized. It is necessary, however, to use great caution in regulating the temperature at which the ether is evaporated, for the pancreatization of the fat may be destroyed by heat. (See my paper on the Special Action of the Pancreas on Fat and Starch, Proceedings of the Royal Soc., 1868, re-printed in the 5th Edition of my little work on Diet and Regimen, p. 185.)

To return to the question of the alkalinity of pancreatic digestion, upon which there has been so much misapprehension, I will quote the opinion of Mr. Schweitzer, expressed in a letter to me on the subject in the following words: "During the seven or eight years that I have been daily preparing large quantities of pancreatic emulsion, I have found that the pig's pancreas has usually an acid reaction; sometimes, but rarely, it has a neutral and even an alkaline reaction; but the emulsifying power of the pancreas is the same in all the cases, and is not at all dependent upon acidity or alkalinity. My experiments on diastase, pepsine and pancreatine lead me to believe that neither of these digestive agents hinders the activity of the others; on the contrary, they seem rather to assist each other, and it is quite certain that the presence of pepsine does not interfere with the action of pancreatine any more than the saliva interferes with stomach digestion."

In concluding his paper, Dr. Hoskin makes the following remark: "I think it is the duty of the physician to look into the properties of the medicines he prescribes, and not be content with the assertion of those who make a business of making most elegant pharmaceutical preparations, but very often most *useless* therapeutical agents." In this remark I most warmly agree, and it is especially important in the case now under consideration, in which we are dealing with remedies for the most insidious and fatal diseases. I therefore feel bound to enter a protest against the use of my name in connection with a preparation, now being sold in America, with the following label, "Pancreatic Emulsion, a new remedial agent, originated by Dr. Dobell, and prepared by J. S. Hawley, M.D., Greenpoint, N. Y." In the first place, Dr. Hawley has not the slightest authority from me for the use of my name upon his label, and I particularly object to it, and I should do so even if the preparation were what it professes to be, viz., the pancreatic emulsion originated by me. But I regret to say that a most careful examination of Dr. Hawley's preparation obliges me most emphatically to condemn it as in no way representing the preparation which I originated, and which I strongly recommend. It is certain to disappoint those who use it, not only by disgusting the patient, but by utterly failing as a remedial agent in wasting diseases. I am *quite ready to believe that Dr. Hawley intended to produce a reliable preparation*, but before he put it forward with the authority of my name, he should certainly have submitted it to me for approval. It is well known that I have no pecuniary interest in pancreatine and pancreatic emulsion, and that my only desire is to see what I have proved to be most valuable remedial agents prepared in such a manner that they shall be reliable, and enable the public and the whole profession to benefit by their use; therefore it is of no consequence to me who makes or sells these preparations so that they are pure and good, but I feel bound to protest against inert and unreliable imitations of important remedies.

The following are the results of an examination of Dr. Hawley's Pancreatic Emulsion, separately made by two Fellows of the Chemical Society and confirmed by myself:—"A granular, semi-solid dark mixture of solid fat and glycerine, having a strong smell of rancid fat. It was *not* an emulsion, for fat and glycerine were separately contained in it; whatever it might have been at first, there were no traces of good emulsification when examined. It differed from true pancreatic emulsion in the following essential particulars:—(a) It was incapable of mixture with water. (b) It contained 30 per cent. of glycerine. (c) It is put up and kept in corked bottles, with a piece of tin foil between the emulsion and the cork, without any injury occurring to either the cork or the foil, whereas *pancreatic emulsion rapidly destroys both.* Dr. Hawley's preparation is, therefore, altogether a different article from that prescribed by Dr. Dobell." I have not had an opportunity of examining "Hawley's Pancreatine," used by Dr. Hoskin in his third experiment, but if it is in any way comparable with his so-called "Pancreatic Emulsion," it is certainly worthless.

Dr. Hoskin says:—"Dr. Dobell recommends (in his work on Tuberculosis) the giving of pancreatine, but he does not so urgently speak of it as of the pancreatized solid fat, and, in fact, I think his position in regard to that is somewhat equivocal." I am at a loss to understand Dr. Hoskin's meaning in the use of the word "equivocal." I think he must have used the word by mistake, because there was certainly nothing "equivocal" in my position, as he will see by reference to my paper to the Royal Society, already quoted, and to my work on Tuberculosis, 2d Edition, p. xii., Introduction, and p. 68 of the work itself. In that work, I was especially relating the effects of *pancreatic emulsion* as used at the Royal Hospital for Diseases of the Chest in the treatment of consumption, and *pancreatine* was only mentioned in passing. Since that work was published, I have used pancreatine extensively in the treatment of different forms of dyspepsia and wasting fever from mal-assimilation. When properly prepared, it is certainly an extremely valuable remedy. It far exceeds pepsine in its results, because it assists in the digestion of carbohydrates, hydrocarbons and albuminoids. When required more especially for digestion of albuminoids and carbohydrates, it should be given directly after food; where it is the hydrocarbons which especially require its use, it should be given one hour after the meal; when given to assist the digestion of cod-liver oil, it should be mixed with the dose of oil at the time of administration. (See *British Medical Journal*, Feb. 8, 1868.) In my practice, I always use Savory & Moore's pancreatine powder, and I have no confidence in any other form. "All attempts to isolate the several properties of the pancreas have failed, no one of such products having been found to possess in perfection the property of acting upon fat, &c., in the manner described in this paper as peculiar to the pancreas. By the term 'pancreatine,' then, I desire to represent the entire property of the pancreas, extracted in a convenient form for keeping, for experiment, and for administration as a remedial agent."—(Proceedings of Royal Society, No. 97, already referred to.)

RUPTURE OF THE RIGHT AURICLE OF THE HEART FROM SUDDEN COMPRESSION OF THE THORAX.

By Robert Amory, M.D., Brookline.

Last May I was called, between the hours of 3 and 4 in the morning, to a railroad station in Longwood. On my arrival, the only history to be obtained was as follows: A man, about 23 years of age, was trying to "couple" a passenger car, having a Miller platform, to another car in front with a common platform. In doing this, he stood between the two cars, facing the forward one, with the pin held up in one hand. The engine backed the forward car on to the hinder one, thus compressing the thorax of the man between them; but not so forcibly, as was afterward ascertained by a post-mortem, as to break any bones either in front or back of the thorax. Judging from the circumstances, the platform of the forward car was on a level just below that of the diaphragm, whilst the level of the other platform behind must have been at least four inches higher, bringing the compression behind at the scapular region. I arrived about twenty minutes after the accident, and found the body of the man lying upon its back on the floor, in a state of commencing post-mortem rigidity. This condition of rigidity I reserve for future consideration, and will relate the facts of the autopsy, which was performed by Dr. Trull and myself at 10 o'clock the same morning, six and a half hours after the accident.

Complete muscular rigidity, the right arm extended upwards in a state of semi-flexion at the elbow-joint, the left arm very slightly flexed at the elbow-joint, but hanging down by the side. No marks of external bruise or abrasion upon any part of the skin. No appearance of fracture of any bone. After making an incision along the median line over the sternum and exposing the bones of the thorax, we cautiously removed the sternum by cutting the costal cartilages, and the anterior mediastinum was exposed to view. The external surface of the pericardium was whitened and covered here and there with white flocculent or fibrinous particles. Its appearance was rough. On opening the pericardial sac, about a pint of clear serum poured out, which was soon followed by reddened serum, and afterwards by dark thick blood. This latter seemed to have been present in different strata, the upper being thin serum, and the lower thick blood and a few coagula. After cleaning out the interior of the sac, the dark blood was seen to pour out from an opening on the anterior aspect of the right auricle. After the auricle had been emptied of blood, we examined this opening, and found that in the inner layers of tissue the opening was wider than in the outer layers. A careful examination of the cavities of the heart showed no appearance of valvular disease or fatty degeneration.

I assume that the sudden and severe compression of the thoracic walls was transmitted to the thoracic viscera at a time when the right auricle was full of blood pouring in from the venæ cavæ, and consequently when its walls were thinnest and weakest; the blood not being emptied fast enough caused a rupture of the auricular sac from the sudden compression. As the court of inquest were waiting for the result of the autopsy, we had no time for further examination, the rupture of the auricle being sufficient cause of death. From our hasty examination, no other lesion of the thoracic viscera was determined.

Prevention of Tormenting of Horses, etc., by Flies.—M. Lochard, a veterinary surgeon, describes a simple and economical means of preventing the suffering which is induced in horses and other animals by the persecution of flies, and which our provincial readers will probably be induced to try. It consists in painting with a pencil the insides of the ears, or other parts liable to be bitten, with a few drops of empyreumatic juniper oil (*huile de cade*). Insects will not approach the parts so painted, and the cost of the oil is trifling.—*Journal de Connaissances Méd.; Cincinnati Clinic.*

REPORT ON DERMATOLOGY.

By James C. White, M.D.

[Concluded from p. 563.]

Eczema of the Eyelids.—In a long article on this affection, by J. Gayat, of Lyon (*Annales de Derm. èt de Syph.* Quatrième année, No. 5), the author ascribes its artificial varieties to the following causes: The muco-purulent secretion furnished by a lachrymal fistula or a neighboring ulcer; a chronic epiphora; the purulent secretion of a conjunctivitis; the rubbing of other eruptive manifestations (pityriasis, psoriasis, herpes, &c.); the application of remedies used in the treatment of conjunctivitis and non-eczematous eruptions; direct and violent contact with some foreign body; the retention of cutaneous secretions by bandages.

In the treatment of this stubborn affection, the difficulties of which he appreciates, Dr. Gayat has little that is new to recommend.

Inoculability of the Pustules of Ecthyma.—Vidal (*Annales de Derm. et de Syph.*, No. 5, 1873) gives the results of experiments made by himself and others in French hospitals, from which he draws the following conclusions:

1st. The pustules of ecthyma in typhoid fever, and those of simple ecthyma, are auto-inoculable.

2d. The pustule of inoculation in its phases of development follows an identical course with that of the spontaneous pustule. The first day there is seen, some hours after the inoculation, at the point of insertion, a red point, already a little indurated, which is generally the seat of a lively itching. The second day, the redness extends to about a centimetre in diameter, and a hard nodule forms and rises above the surface of the skin. The third day, the redness is more extensive, the hard and inflamed elevation becomes pointed, and forms the base of a small vesicle, which contains a little turbid serum. The fourth day, the pustule of ecthyma assumes its complete and adult character, and furnishes an inoculable pus. On the ninth or tenth day, it dries up, and the crusts fall from the sixteenth to the twentieth day.

3d. The liquid taken from pustules of the second generation is also auto-inoculable.

4th. Its activity diminishes gradually in successive inoculations; and its power of reproduction ceases at the third or fourth generation.

Cutaneous Horns.—Dr. Bergh, of Copenhagen (*Archiv für Dermat. und Syph.* V. Jahr., Zweites Heft), contributes two new cases to the list of these growths. With regard to their genesis, his observations confirm those of Lebert that they are both of follicular and of papillary origin; that is, a hyperplasy of the epithelium of the rete which descends to line the glands, as well as of that which ascends to cover the papillæ. The former seems to be more commonly their starting-point. They often grow from the bottom of a sebaceous cyst, either enclosed within its capsule, or, subsequently to its rupture, as a secondary product, just as the papillary variety is often developed upon a long-standing wart. The relation of cutaneous horns to epithelioma is noticed, the latter being an occasional occurrence after the removal of the former, just as it may develope upon the seat of many chronic epidermal growths, or in lupus.

Des Melanodermies, &c. Par Dr. Fabre. Baillière et fils. Paris: 1872. Pp. 104.

The author gives an interesting and complete account of the many and various affections which have been classed under this general title. Concerning their etiology, he says: The causes of congenital melanoderma are almost entirely unknown. Of those which are acquired, he makes two grand divisions; those due to an external cause, those due to an internal cause. The former may be produced by direct contact with certain substances, such as vesicants and other irritating substances; to cutaneous affections, such as prurigo, lichen, eczema, &c.; to the presence of parasites upon the skin, both vegetable and animal; to the action of solar light and incandescent bodies. The latter may be due to a physiological condition, pregnancy; to a pathological state; the cancerous, tuberculous, scrofulous and palustrine cachexias, or to other conditions of profound debility; to the absorption of medical or toxical substances, as salts of silver or aniline.

Means for the Removal of Syphilitic Pigment Stains.—M. Langlebert suggests (*Lyon Médical*, from *Gazette des Hôpitaux*) the application of blisters to old stains of syphilitic origin, and the continuance of the suppuration by the subsequent use of stimulating dressings for a week. In this way he has caused brown stains of several years' duration to disappear.

Etudes sur le Molluscum. Par L. Malassez. Paris: 1872. Pp. 32.

This monograph contains observations made upon five cases of so-called molluscum, with descriptions of the anatomy of the growths and illustrations of their appearances in section by the microscope. According to their minute anatomy, these tumors were fibroma, sarcomatous fibroma, fibro-myoma, and angioma. The writer reviews the literature of the various affections comprised under the name molluscum, and arranges them under the following classes: sarcômes, fibrômes, myômes, angiômes, lymph-adénômes, tumeurs acnéiques (sebaceous affections), and tumeurs encore indéterminées (molluscum cholestéarique of Bazin, and molluscum d'Amboyne of the Moluccas).

The term molluscum he thinks still worth retaining as of general use, although it possesses no anatomical significance.

Scleroderma.—Dr. Van Harlingen, of Philadelphia (*Amer. Journal of Syph. and Dermat.*, Oct., 1873), offers, in connection with the report of a case, and with a review of the modern literature upon the subject, the following definition of the disease: Scleroderma is an affection of the skin, characterized by diffused, symmetrical hardening, and generally accompanied by more or less pigmentation. Beginning in some particular locality, without febrile disturbance, swelling or œdema, the induration spreads with greater or less rapidity over a considerable extent of surface. The affected parts fade gradually into those which remain healthy, without any distinct line of demarkation, and they are on a level with the general surface, neither raised nor depressed, and contain no tubercles or other elevations. The temperature of the affected surface is either normal or slightly depressed. The general sensibility, as well as the functions of the glands are unaffected, save in the advanced stages of the most severe cases. It runs a chronic course, uninfluenced, or nearly so, by therapeutical applications, and has no tendency to a fatal termination. Pathologically, the disease consists, essentially, in a great increase in the fibrous elements of the corium and papillary layer, decrease of fat in the subcutaneous connective tissue, and deposit of pigments in the lower layers of the epidermis and in the rete.

Lupus Erythematosus. Inauguraldissertation. Von Dr. THEODORE VEIEL. Tübingen: 1872.

Zur Therapie des Lupus und Lupus Erythematosus. Von Dr. ERNST VEIEL, in Cannstatt. *Archiv für Derm. und Syph.* V. Jahrg., Zweites Heft.

The first-mentioned work, that of the youngest Veiel, contains a record of all the cases of Lupus erythematosus which have been treated at the institution of his father and brother at Cannstatt during the past seventeen years, with a good description of its natural history, and a detailed account of the various forms of treatment there employed against it. Up to the time of its publication, the best results were obtained by chloride of zinc in solution in an equal quantity of alcohol, used as follows: a blistering plaster was first applied to the whole affected part. The epidermal covering, which formed a thick and opaque coat, was then removed, revealing the deep-red, velvety papillæ, sharply defined by contrast with the firmer and paler healthy portions. The diseased parts were then painted with the solution. The pain is considerable. The yellowish-white, varnish-like crust which forms, is removed by poultices on the third or fourth day, and the cauterized parts are found covered with epidermis, offering in this respect a marked contrast to Lupus vulgaris, which exhibits under similar treatment a surface of exuberant granulations, which cicatrizes much more slowly. Points which still remain open quickly heal under the use of the alcoholic solution of chloride of zinc, diluted one-third with water. Cauterization in this way is repeated until the cure is complete. Although the scars are larger than after spontaneous cicatrization, they are not in the majority of cases disfiguring.

In the last-named article, Dr. Ernst Veiel gives a detailed account of the later method employed at the Cannstatt skin-hospital, which is a combination of the chloride of zinc cauterization above described, and the Volkmann's method of scarification noticed in a previous report. For this purpose, and to prevent the great loss of blood, which often follows the use of the customary single lancet, 150 to 200 grammes generally flowing when the operation is prolonged for the necessary half hour, in ordinary cases affecting the face, he has designed a set of blades placed side by side and inserted in a common handle, by which six punctures are made simultaneously. The operation is reduced to five to ten minutes in duration, and thus more immediate attention may be given to controlling, by pressure, the hæmorrhage. On this account, too, the necessity for the use of anæsthetics during the operation is diminished, although, as the author says, the principal effect upon the patient is not produced by the scarification and cauterization, but by the persistent pain which often lasts eighteen or twenty-four hours, and then "the danger which is a part of every administration of chloroform is out of all proportion to the amount of pain to be endured."

Directly after the puncturing, cauterization of the parts thus treated with the alcoholic solution of chloride of zinc is performed. Superficial suppuration follows, and crusts form, which fall off in from six to ten days, after which the puncturing and scarification are again performed. This is repeated until a smooth and uniform cicatrix is formed, which subsequently becomes white. Generally, five to eight times are sufficient for a perfect cure. Relapses, however, are not wanting, even with this treatment, manifesting themselves as red points in the cicatrix, which by confluence are converted into true lupus spots; but these are easily nipped in the bud by a repetition of the treatment.

In ordinary lupus, Dr. Veiel thinks this method effects a material reduction in the time of cure. A longer period, however, between the operations is required, inasmuch as ulceration often ensues upon the parts most deeply cauterized, which must be healed by repeated applications of the diluted solution of chloride of zinc before another scarification.

Photographs of Leprosy. With explanatory Notes by A. F. Anderson, M.D., of Singapore. London: 1872.

This series of illustrations of leprosy, as it appears in the Straits Settlements, presents by far the best representations of the disease that have ever been published; the best specimens, too, it may be added, of photography applied to dermatology. Each of the fourteen plates (in small quarto) is expertly and artistically colored, and the series furnishes a faithful but frightful picture-gallery of poor human nature under its most revolting and miserable aspect. Leprosy is becoming a possible home-question to ourselves, as our intimate relations with the Sandwich Islands and our large immigration from China render it not improbable that it may gain a foothold among the foreign population of our Pacific coast. Our Atlantic importations from the Scandinavian nations do not succeed in establishing it within our inter-oceanic territory.

It is among the Chinese, the class to whom leprosy is almost entirely confined there, that Dr. Anderson finds the examples of the disease he pictures. They are all of the male sex, and a female affected by it he has never there seen. With regard to the question of contagion, he says: "We find lepers shouldering us in the streets, squatting on our door-steps, upon which the discharge pours from open ulcers with which most of them are affected, from whose skin scales fly off with the breeze, and emanations from whose bodies we inhale with every breath when in their vicinity; were it, therefore, as contagious as some would have it, we should be inclined to think that the disease would be propagated much more manifestly and extensively than it is. That it may be propagated by inoculation I can well conceive, and believe, also, from all I can gather, that it is hereditary." The causes of leprosy, he thinks, are the influence of marshy effluvia, bad and insufficient diet, bad ventilation in sleeping-rooms, an hereditary taint, and in some cases direct inoculation.

Leprosy; Elephantiasis Græcorum.—Dr. Liveing, in the Goulstonian Lectures for 1873, gives an excellent sketch of the history, distribution and etiology of this affection. With regard to the latter, he draws the following conclusions: Firstly, its primary cause is yet unknown. Next, of secondary causes, diet and hereditary tendency are by far the most important; and climate, soil and race are not without a certain influence on the development and progress of the disease. Lastly, leprosy, if not contagious, is capable of propagation by the imbibition of the excreta of lepers. So far as treatment is concerned, means of prevention are more likely to be efficacious than attempts at cure.

Development of Cancer of the Skin. (*Amer. Jour. of Syph. and Derm.* from *Virchow's Archiv.*)—According to Carmalt, who has examined three carcinomatous tumors of the skin, the epithelium of the hair follicles is the point of departure of the cancerous growth, which throws some light upon the cause of cancer of the skin. Führer states that frequent and rough shaving is apt to produce cancer of the skin of the face. Out of 50 or 60 cases of cancer of the lip and cheek occurring recently in the Breslau Pathological Institute, only two were in women, and not one case among men with unshaved beards. Carmalt supports the view of Waldeyer and others, regarding the histological origin of cancer, that every cancerous growth originates in the epithelial elements of the part, which opposes Virchow's views that the cancer-cells are the equivalents of connective-tissue corpuscles.

A New Method for Healing Ulcers.—Dr. Nussbaum (*Phil. Med. Times* from *Wien. med. Presse*) claims to have successfully treated upwards of sixty cases of chronic, extensive, and otherwise intractable leg-ulcers, by the following simple procedure. The patient is at first etherized, and then around the ulcer of the leg or foot, a finger's breadth from its margin, an incision extending down to the fasciæ is made; numerous bloodvessels are divided, and a severe hæmorrhage ensues, unless a fine pledget of lint be packed into the cut and the entire ulcer strongly compressed. The packing with lint is also necessary to prevent union of the cut edges by the following day. Upon the second day, the bandage and lint are removed; from then until a cure is effected a simple water-dressing is applied. The author states that an astonishing change can be seen, even in the first twenty-four hours. The ulcer which yesterday threw off quarts of thin, offensive, ichorous pus, furnishes to-day not more than a table-spoonful of thick, non-offensive, healthy pus. The old ulcer becomes rapidly smaller, healing from the margin towards the centre, and is healed in a short time, but the cut is changed into a broad, circular sore, which also speedily cicatrizes. The great diminution of the secretion, and other favorable changes occurring in the ulcer, find an explanation in the fact that the circumcision has divided dozens of large, abnormally-widened bloodvessels. Time is thus given for the lessened nutritive material, which previously was carried off by the excessive secretion, to be transformed into cells and connective tissue; in other words, granulations are formed, which fill up and heal the deep ulcer. Without claiming this as a radical method, the author assures us that the cure is much more rapid, and the cicatrix becomes more elastic and resisting, than in the ordinary means applied, which usually require so much time that the patients depart with half-cured ulcers, soon to find themselves in their previous deplorable condition.

Tineæ in India.—Dr. Purdon, in the *Doctor*, Aug., 1873, gives extracts from Surg. Palmer's Notes in the *Indian Med. Gazette,* on the occurrence of diseases of the skin in Calcutta which are caused by vegetable parasites:—

Tinea versicolor.—An examination of the dispensary records, he says, would fail to convey any adequate notion of the frequency of this affection, as in the absence of itching and inconvenience it is scarcely regarded as a diseased condition by those affected. Of the total number of skin diseases on the books of the dispensary during two years, only one case of tinea versicolor is recorded; while among the healthy emigrating people, this affection was found to be very common, especially in the rainy season—nearly six per cent. of the whole number being affected by it; and there is good reason for suspecting it to be still more frequent among the inhabitants of Bengal proper. With us in America its growth is always perceptibly more rapid during the hot summer months while the sweat-glands are most active.

Tinea tonsurans.—On the scalp, this disease is stated to be by no means uncommon among the natives of the Calcutta district; a little more than five in every thousand of the healthy emigrants examined being affected. The form of the disease which occurs on the body is very common among Europeans in Calcutta, constituting nearly half the total number of skin diseases seen amongst them in the two years under review. It most frequently affects those parts of the body which are kept moist with perspiration, as the fork of the thighs, the armpits, &c. There is a very general impression that it is in some way caught from the native servants.

Deux Points de l'Histoire du Favus.—Par Dr. GUSTAVE GIGARD. Paris: 1872. Pp. 51.

It is not easy to discover what two points in connection with favus the writer of this thesis would especially illustrate; no new points, certainly. He first considers the question of the relations of the fungus found in it to other fungi, and narrates some of the more recent culture experiments; then that of its spontaneous occurrence upon animals and the reciprocal transmission between them and man. Numerous experiments are described relative to the inoculability of favus matter upon animals. The following conclusions are offered: 1. Favus upon man and upon animals is caused by the presence of a fungus called achorion Schoenleinii, which, as a species, belongs neither to the genus penicillium, aspergillus, nor mucor. 2. This parasite is developed upon man and upon animals without any exact knowledge of the source of the spores, the air appearing to be the principal agent in their transmission. 3. The animals most frequently affected are the mouse, cat, rabbit, dog and hen. It is rare with the ox and horse, it being apparently replaced in them by tinea tonsurans. 4. The youth of the subject does not appear to be an indispensable condition of contagion. 5. The plant seems to be transmitted to the skin by erosions upon it made by the nails, teeth or spurs. 7. The achorion, in becoming old, appears to lose a part of its infectious properties, but the conditions necessary to its constant germination are little known. 8. Human favus, even when fresh, inoculated upon the mouse, may completely lose its infectious properties; when it is immediately re-inoculated from the mouse to man, its structure does not appear changed; its germinative faculties only have disappeared.

Alopecia areata.—Pincus states, in the *Berliner klinische Wochenschrift (Jahresbericht gesammten Medicin,* 1873) that the early loss of sensibility in the affected portions of the scalp gradually gives way to an increased sensitiveness. There is either an œdema of the whole thickness of the skin or of its upper layers. He recognizes two varieties. In the one, there is an affection of the trophic fibres, and the prognosis is favorable. In the other, there is an irritation of tissue, which leads to atrophy, and in this form no good result can be expected from treatment.

Erlach, in the *Correspondenz-Blatt Schweizer Aerzte,* states that five or six cases of this affection are yearly seen in Bern. According to his observations, there is occasionally to be found upon the stumps of the hairs which have broken off just below the surface of the scalp, and which may still be extracted by forceps about the borders of the bald patches, the growth of a peculiar fungus, in the form of filaments surrounding the shaft. In reply to the attempt of Prof. Frey, of Zurich, to interpret their presence by the supposition that they are only the curled-up edges of epithelial cells, he states that they remain unchanged after the hair-substance has been destroyed by a solution of potash. In some cases, collections of minute transparent spores are seen at the bifurcation of the spiral filaments. In many patients with this affection, such growths may not be seen for months, while at other times they are visible for a week. With other patients, they are never found. Erlach is not disposed to regard the disease as a neurosis.

Eruptions from Chloral.—Dr. Kirn (Dr. Purdon's report from translation in *The Doctor*, Aug. 1, 1873) describes these as consisting of more or less extensive erythemata, and pustular or papular exanthemata. Schüle speaks of chloral producing a tendency to fluxionary hyperæmias and increased heart action, early manifested in the head by an intense erythema, occurring first in spots, but afterwards more diffusely, and which in more pronounced cases extends downwards towards the trunk. This chloral rash remains latent until set going by some stimulus to the vascular system, but then appears with an intensity proportionate to the extent of chloralization. This opinion is confirmed by the author, who states that he is acquainted with a series of patients in whom the chloral rash can be produced with the certainty of an experiment. For instance, in a paralyzed patient, who took thirty grains of chloral every night, ten minutes after she had drank her beer, there occurred increased action of the heart and spots of roseola upon the forehead, nose, cheeks, and neck, which quickly coalesced into a patchy erythema, with swelling and heat of the affected parts, which symptoms disappeared in about an hour. The same symptoms appeared still more strongly in a young and previously healthy woman affected with mania, who every night took from thirty to forty-five grains of chloral. As soon as she took a glass of beer, there was strong pulsation of the arteries, and the whole face was swollen and of such an alarmingly deep color that the use of wine and beer was forbidden. At present, the author but rarely allows alcoholic drinks to patients who are being treated with chloral. The effect is not always limited to congestion and erythema of the skin, but other skin affections are occasionally produced. Female patients who had taken sixty grains of chloral daily, first had erythema of the face, and, later, a papular rash on the arms, with red bases. In some, nettle rash occurred. In several patients, a swollen condition of almost the whole body was noticed, which might be ascribed to serous infiltration of the skin from stasis of the blood. Reimer observed, in a series of patients, especially after the use of morphia and chloral together, that, after slight external pressure, there was congestion in circumscribed spots, with lowered sensibility, which quickly disappeared if the pressure was soon removed. Under less favorable circumstances, the red spots swelled and assumed a darker color; vesicles were soon developed, which might even run on to sloughing.

TREATMENT OF SMALL-POX IN THE WIEDNER HOSPITAL.—In the Wiedner Hospital (in Vienna), every patient, upon admission, no matter in what stage the disease may be, is washed all over with warm water and soft soap, and then carefully dried and put to bed. His whole body is then enveloped in linen cloths, which have previously been dipped in a mixture of glycerine and water (one part glycerine, two parts water), while a mask of the same material, having an opening for the eyes and mouth, and saturated with the same solution, is placed over the face. The washing is repeated every day, and the cloths are changed as often as they become dry (every few hours), until every trace of *scabbing* has disappeared. This treatment, it is true, is somewhat troublesome, but the results obtained by it are exceedingly satisfactory. It has the effect of lessening the painful feelings of tension and heat, and preventing the formation of any disfiguring cicatrix.

The death-rate under this treatment, during the last small-pox epidemic, was about 4.43 per cent. (2.42 for men, 6.45 for women), while the average duration of treatment was fourteen days. In the General Hospital, in Vienna, under the expectant treatment, the death-rate for the year 1871 was nine per cent., and the average duration of treatment eighteen days; the difference in favor of the former treatment being very considerable.—*Letter from Dr. Carl Schweigerhof in the Irish Hospital Gazette.*

RASMUSSEN ON THE PATHOGENY OF HÆMOPTYSIS IN PHTHISIS.—At the recent meeting of the Scandinavian Medico-Physiological Association, in Copenhagen (*Hospitals-Tidende*, July 9), Dr. Rasmussen read a paper on the pathogeny of hæmoptysis in the course of chronic phthisis. After giving a brief *résumé* of his former communications on fatal hæmoptysis in chronic phthisis from the bursting of small aneurisms developed in the walls of caverns, he related three cases in support of his views. In the first case, intermittent hæmorrhages took place during eleven days from an aneurism as large as a walnut. In the second case, the first symptom of the disease was hæmoptysis. The patient was addicted to the use of alcoholic drinks. Death took place eleven days after the last attack of hæmoptysis. In a cavity of the size of a walnut, at the apex of one lung, was found an aneurism as large as a hazel-nut, filled with recent coagulum, colored only at the outer part. In the third case, a phthisical patient had three severe attacks of hæmoptysis ten months before his death, which took place during a similar attack. On section, an aneurism of the size of a pea was found in a pouch connected with a large cavity. It presented evident traces of having burst some time previously, and was filled with a firm colored coagulum channelled in the centre.—*The London Medical Record.*

Bibliographical Notices.

The Study of Sociology. By HERBERT SPENCER. New York: D. Appleton and Co. 1874.

IN an age like this of specialists and comminuted intellectual acquirements, it is a great pleasure to meet with a mind which is periscopic enough to survey the whole province of human knowledge. It is like getting from the Brighton cattle-pens into the Park—that is to be. The intellects of the high-power observers take in a very small field and let in a very small amount of light. If there were no objectives but twelfths and twenty-fifths and fiftieths, it would be impossible to make a good drawing of a section of a kidney or of the spinal marrow.

No man has openly challenged all knowledge as his province since Lord Bacon, but more than one has undertaken a task which implied a purpose nearly as extensive. Mr. Buckle's History of Civilization in England traced an outline which nothing short of omniscience could have completely filled out. Mr. Herbert Spencer's philosophies invade, one after another, all the chief territories of human knowledge. The little volume before us talks common sense in plain language, but it is impossible not to see that it is a master of all arts and sciences, so far as it is given to one man in our day to answer to such a title, who is discoursing to us.

A man's accuracy is tested by his statements, his breadth of view is shown by his illustrations. Every page of Mr. Spencer's writings is illuminated by those side lights which only a great scholar, in books, or nature, or both, can throw upon the subject with which he is dealing. Possibly he may be tripped up here and there by an expert who knows every inch of his own little patch of ground and nothing beyond it, but in the main he is to be trusted as having conscientiously studied and fairly represented any branch of knowledge with which he deals. Theologians, statesmen, astronomers, physicists, biologists, including physicians and all the rest, find him handling their various specialties as if he had been in the pulpit, in the cabinet, in the observatory, in all laboratories of science and all workshops of art, and felt himself at home in all. Mr. Gladstone's "mental attitude," Mr. Arnold's philology, Sir William Hamilton's originality, the shortcomings in the Indian medical service, the various delays of the law, the laches of the clergy (in paying their subscriptions to a certain serial publication), are all subjects of comment or used as incidental illustrations in this small volume.

Yet Mr. Spencer, though he makes free with everything and everybody, does it in the best spirit and the best temper. He fights Mr. Gladstone's conservatism, but he respects him for it, and would not have him other than he is. He is too much of a biologist not to understand that *interstitial renovation* is the law of the social organism as well as of the individual body—that there must be a principle of resistance to change as well as an agency which has served its purpose and substituted a new particle in the place of that which is carried out of the system. One cannot read this book without feeling that the writer is, or at least means to be, perfectly fair, candid, passionless, that his mind is as nearly *achromatic*, if we may recur to the simile already used, as the media through which truth is seen can well allow a human intelligence to be.

This particular work is only an introduction to an elaborate treatise on the Principles of Sociology, upon which Mr. Spencer has been at work for some years. Many of our readers must have become familiar with its teachings by seeing it in the monthly numbers of the *Popular Science Monthly.* The periodical just named is in the hands of very many readers who hardly consider themselves students of science, and who yet, under its instructions and that of similar intelligible presentations of scientific knowledge, are finding themselves qualified to have positive opinions on subjects which the preceding generation would have thought incapable of being popularized as we see them to-day. What Max Muller says of England, is probably true of some sections of the United States, namely, that there exists a far more diffused culture and interest about science and literature in that country, especially among women, than even in learned and scientific Germany; the reason being that the English enjoy a perennial supply of science, made easy in popular lectures and readable periodicals. A very brief analysis of a work so easily accessible in its different forms is all that can be necessary.

Having, in his first chapter, shown our need of a social science, in the second demonstrated the possible existence of such a science, and in the third explained its nature, he proceeds to treat of the difficulties which stand in the way of generalizing the phenomena on which a sociology must be founded; first, from the nature of these phenomena, secondly from the defective training and other personal disqualifications of the observer, and, thirdly, from the fact that he is himself a part of the aggregate body the phenomena of which he is to observe. These points he illustrates in detail in the succeeding eight chapters.

One cannot help thinking of the Idols of the Tribe, of the Den and of the Theatre, as he reads these acute and searching expositions of the various illusions and prejudices which this calm iconoclast puts forth with such destructive impartiality. His business is to show how fettered and paralyzed we are by the conditions in which we are born and bred, and he does it like a philosopher and a man of breeding, always courteous, sometimes almost playful, but sparing none of our infirmities or incapacities.

After warning the student against the errors into which he is liable to fall, he devotes the next three chapters to a consideration of the preliminary discipline and studies which are needful as a preparation for the proper pursuit of sociology as a science. Our own professional readers will find the two chapters headed "Preparation in Biology" and "Preparation in Psychology" of especial interest. But they will meet with many facts and inferences scattered through the volume which bear on the theory and the practice also of their own calling. No specialist is safe from the omnivorous intelligence of Mr. Spencer. He picks everybody's pocket of his private store of knowledge and makes it serve a larger purpose than its owner ever dreamed of.

There is not a great deal in this little book to give offence to the more sensitive traditionists, but such may keep their tempers better if they will skip an heretical paragraph or two. We quote, only for the sake of warning them off from a doubtful page, the instance he gives to show that a belief in divine interposition goes along with a belief in the production of effects by natural agencies. He refers to the well-remembered case "when an unpopular prince suddenly gained popularity by outliving certain abnormal changes in his blood, and when, on the occasion of his recovery, providential aid and natural causation were unitedly recognized by a thanksgiving to God and a baronetcy to the doctor."

Mr. Spencer is very plain spoken, and now and then, as in the instance just given, slightly satirical, but he is never rude, for the reason that he has a philosopher's respect for the weaknesses and shortcomings of his fellow creatures. Science dignifies everything it deals with, down to coprolites and pediculi, which last have been studied with enthusiasm by Mr. Denny and Mr. Murray, as Darwin informs us, and which one of our own most gifted observers, whose early loss science must long deplore, Dr. Waldo Burnett, used to pasture, in the most self-sacrificing way, on his own person, so as to study their structure and habits.

We have said enough, we hope, to lead some of our readers to look at Mr. Spencer's book for themselves. Every chapter of it is instructive and the spirit of it is that which should animate every man who calls himself a student of science; a willingness to embrace every new truth, even before it has received the baptism of general acceptance, and a tender respect for the memory of the half-truths which have helped the world along in their day, and are entitled to all the civilities of a decent interment. O. W. H.

Lectures on the Diseases and Injuries of the Ear. By W. B. DALBY, F.R.C.S., M.B. Cantab., Aural Surgeon to St. George's Hospital, London. Philadelphia: Lindsay & Blakiston. Pp. 230.

THIS work consists of the full course of eleven lectures, abstracts of which appeared in the London *Lancet* in 1872. They give, in a very readable form, the anatomy, physiology, diagnosis and treatment of the diseases of the ear according to the most recent investigations, and are destitute of the carping criticisms of the works of others which have been but too common in many foreign treatises. The author has selected his material with care, advises treatment which he has found useful, but at the same time explains other methods which have been recommended.

The work is intended as a text-book for students and practitioners, and is well adapted to the latter class, as a large part of each chapter is occupied with treatment; for students, we should have preferred more complete descriptions of the pathology of the diseases spoken of. A certain lack of system, or, perhaps we should better say, a want of distinctive headings, injures the work as one of ready reference, but the easy and interesting style of the author almost compensates us for such a loss. The book is well calculated to increase the interest in ear-diseases which has sprung up of late years. J. O. G.

BOOKS AND PAMPHLETS RECEIVED.

Parasitic Origin of Skin Diseases. By Jabez Hogg. London: Baillière, Tindall & Cox. 1873. Pp. 108.

The Life of John Warren, M.D. By Edward Warren, M.D. Boston: Noyes, Holmes & Co. 1874. Pp. 568.

Boston Medical and Surgical Journal.

Boston: Thursday, December 11, 1873.

It is announced at the City Hall that the entire force of the fire-department is to be subjected to a medical examination, with the view of eliminating therefrom some of the more inefficient members. Such an examination, provided it be conducted in a thorough, rigid manner, cannot fail to be of utility to the public service. It is a fact, with which most medical men are cognizant, that there are at present connected with both the fire and police force a large number of men, appointed to and retained in office solely by political influence, who, being the victims of various chronic disorders, are physically incompetent for the performance of any duty involving prolonged exposure in the open air. When the weather is not inclement, these semi-invalids are enabled to assume a tolerably healthful appearance, but the severer days of our New England winters serve to stir up their latent troubles, and they are then compelled to seek refuge in some corner grocery, or drug-store, or else they must be temporarily excused from service. An instance has recently come to our knowledge in which one of these delinquents, suffering from a chronic disease which renders him absolutely disqualified for service, having been obliged to absent himself from duty for a few days, actually entered a claim for the payment of his physician's bill. The money, taken from the fund contributed by benevolent persons for the aid of sick and deserving members, was handed over to him. Many of these men, like the one above alluded to, are enfeebled by reason of some organic or functional disorder, which an examination, such as is accorded to applicants for life-insurance, could not fail to detect. The services of still others of this class might be dispensed with, without detriment to the force, from the circumstance that their bodily imperfections are such as to seriously impair their efficiency. Some are loaded down with an excess of adipose tissue; others are only remarkable for their inferior physique, being manifestly deficient in muscular development, or having a contracted chest or stooping shoulders. All these men are comparatively useless, when vigorous, active service is called for, as upon the occasion of street riots.

Applicants to both these offices are always numerous, for the wages are high and payment certain, and there can be, therefore, no reason why both our firemen and police should not be composed exclusively of *picked men*, such as command the admiration of visitors in most of the European capitals.

During the last week, the question was raised by one of the profession, as to whether he was bound to reveal what he called a professional secret. We can understand perfectly well that a physican might feel a dislike to communicate anything given to him in confidence, and so would any other man. The being called to see a patient makes him the recipient of very many secrets, personal secrets, family secrets. There are scores of delicate matters within the circle, that no one outside the circle but the physician can know or even suspect. The honor of a family may be necessarily confided to him. The fortune and even the life of a patient may be dependent upon the physician's tongue, as well as upon his medicinal treatment. Outside of the sick room, he knows nothing of what transpires in it. The delirium which reveals secrets, he does not hear ; or if he does, forgets. All this is the rule. But every rule has its exceptions. One great exception to this rule is the rule of the law. He who goes upon oath before the Grand Jury or before the Court swears that he will "tell the truth, the whole truth and nothing but the truth," and imprecates Divine vengeance upon his head, if he violates his word. Even here, an exception comes in, and he is allowed to withhold his testimony, provided he says, still under oath, that it will criminate himself. This is the only exception that we know of.

There seems to be an impression with many medical men that they have no right to reveal what they call professional secrets. As we before intimated, they have no right to be tattlers and scandal-mongers, as some are whom we know of, but there the matter of professional etiquette ceases. It is true, a medical man may feel a diffidence, a hesitation about revealing a matter which came to him in his daily business. We may caution a patient not to tell what he does not wish to have repeated, not to expose what he desires to have kept a secret ; but what he knows he must under oath reveal. If he chooses, he may balance his friendship for a patient against his oath, and calculate the value of that patient's confidence in comparison with perjury, or with the punishment to be inflicted for contempt of court.

Our brethren should understand that a privileged communication is that which a physician is obliged to make, either for the health and safety of his patient, or which he makes without malice under oath and for which he cannot be made to pay damages. The privilege is his and not the patient's. The party against whom he testifies, must be able to prove that the medical man was actuated by express or actual malice, or he cannot recover.

We have to record another death during anæsthesia, and this time the anæsthetic was ether and not chloroform. We desire to be fair, but we think our readers, when they are in possession of the facts, will agree with us that the patient would have been, under the circumstances, at least quite as likely to have died with any other anæsthetic.

We shall, therefore, submit to them the question, whether this enfeebled patient did not die from the combined effects of a very prostrating disease and of anæsthesia in its most general sense, rather than from any peculiar property of the anæsthetic used. We hope to give the details of this case in our next issue.

On the use of Chloral Hydrate to Arrest Incipient Abortion.—Dr. Besnier, of Paris (see *L'Union Médicale,* Sept. 27, 1873), has lately used chloral hydrate in a case of threatening abortion with a perfectly satisfactory result. His observation, fully reported, is followed by interesting remarks upon the action of chloral in abortion and parturition. We give a brief synopsis of his case and of the reflections which accompany it.

The patient, a young primipara, six months with child, was taken with pains in the evening of July 11th. Seen by Dr. B. on the evening of the ensuing day. She had manifest contractions of the uterus, accompanied by pain, recurring every ten or twelve minutes; pulse 80; child active; no cause of premature labor could be made out. Opium was first resorted to. An enema with twenty drops of laudanum produced little or no effect; a second and third, followed by ten drops by mouth, were given with like result. Chloral was then tried. A first dose by mouth being rejected, an enema with 45 grains of chloral was administered; almost immediately, all labor pains ceased, and the patient fell into a deep sleep, which lasted three hours; a second and third enema, each with 30 grains, each produced two hours of quiet sleep. At every awaking, the contractions reappeared, weaker each time.

Laudanum was then again used, in doses of twelve or fifteen drops every two or three hours, according to the indications, and this medication was kept up during the two following days, by which time all apparent danger had subsided.

No phenomena worthy of note occurred after the sedation of the uterus thus obtained. No narcotism was apparent, nor was any disturbance caused by the chloral. The fœtal heart-sounds and movements showed a perfectly satisfactory condition of the child.

Such are the main details of Dr. Besnier's case. Dr. Martineau, having obtained similar good results in a case of abortion (*Gazette des Hôpitaux,* March 25th, 1873), attributed the sedation of the uterus to a supposed "*amyosthenic* action exerted by chloral upon the uterus." Dr. Besnier, however, adopts a different interpretation. Recalling the observations of Dr. Lambert (of the Edinburgh Lying-in Hospital), who found chloral to *increase the energy* of the uterine contractions, rendering them shorter in duration, less frequent, and more powerful (see *Gaz. Hôp.* Feb. 22d, 1873), Dr. Besnier is struck by the apparent contradiction in the action of chloral used in similar doses in *abortion* and in *accouchement* at term, and he tries to reconcile the contradiction as follows: he thinks that, in normal parturition, contraction of the uterus is excited by mechanical action, exerted by the distended membranes, head or presenting part, &c., and that the contractions thus instituted are partly kept up by the reflex action of the labor *pains*; while in abortion, the contractions are generally produced, not by any continuous mechanical agency, but by some accidental and passing cause, as a blow, fall or fatigue, the *pains* being the cause which occasions continuance of the labor. Dr. Besnier, adopting the theory that chloral owes its action to chloroform which is set free in the blood, admits that when given in *labor*, chloral acts as an anæsthetic, which, in normal parturition, suppresses the pains, leaving the mechanical agency to act undisturbed; the contractions being less frequent, and of shorter duration, allow the uterus to recuperate more fully during each interval, whence their greater energy. But in *abortion*, on the other hand, the anæsthetic action of chloral suppresses the pain, and with it the only cause of the uterine contractions. Thus the happy effects of the drug are explained without the necessity of invoking any paralyzing effect exerted upon the muscular fibre of the uterus.

Of course, if the fœtus or placenta were engaged in the os uteri, the conditions would become similar to those of normal parturition, and chloral would only be useful as an anodyne, in relieving pain, not in preventing miscarriage.

Dr. Besnier draws attention to the utility of combining the action of chloral and of opium; and he recalls in this connection the experiments of A. Bernard, and the observations of Guibert, Joujon and Labbé on the association of chloroform and morphia, which show that the anodyne effects of both drugs are much enhanced by their combined use.

[REMARKS:—Besnier's observation and reflections are interesting, as they exemplify and explain the usefulness of chloral in abortion, where we would expect the drug to produce harmful effects, from our previous experience of its action in connection with labor.

We will only add a few remarks to the effect that it would, perhaps, be well to accept with certain reservations, the generally received theory by which the physiological action of chloral is explained. Dumas, Liebreich, Personne and others have shown that chloral hydrate in presence of alkali is decomposed, chloroform and formiate of the alkaline base being produced. It is quite generally admitted, as asserted by Liebreich and assumed by Dr. Besnier, that this reaction is realized in the blood, and to the chloroform supposed to be thus disengaged conjointly with an inert formiate, the sedative effects of chloral are attributed.

Now Dr. Gamgee (see *Pharm. Journal and Trans.*, 2d series, vol. xi. p. 464) has shown that this reaction, which seemed to explain so plausibly the sedative action of chloral hydrate, is only realized when the chloral is treated with *caustic alkali*, and that the salts to which the blood owes its alkalinity are incapable of decomposing chloral at the temperature of the body; the alkaline phosphate of sodium fails to accomplish the production of chloroform, even at boiling heat, while with the bicarbonate of sodium chloroform is only given off after the temperature has been raised above 70° Centigrade. Dr. Gamgee, also, clearly shows that the symptoms produced by small doses of chloral are quite out of proportion to those which might be expected to result from equivalent quantities of chloroform, supposing Liebreich's theory to be correct. The physiological effects are also known to be different, chloroform often producing insensibility before sleep and annulling reflex action, while with chloral, anæsthesia is only obtained indirectly, as the result of sopor, and reflex actions are often rendered more intense instead of being diminished or suppressed. Dr. Gamgee concludes that chemical facts as well as a consideration of the physiological action of chloral and of chloroform militate against the chloroform theory.

Prof. Gubler, of Paris, has also arrived at the same conclusions, having found that the production of chloroform from chloral is only effected by caustic alkalies, and not by the alkaline salts present in the blood.

Until further demonstration, therefore, it would, perhaps, be prudent in studying the action of chloral to carefully observe its intrinsic properties, rather than to rest satisfied that the drug owes all its properties to gradual evolution of chloroform.]

The Hospitals.

MASSACHUSETTS GENERAL HOSPITAL.

(Saturday, November 29, 1873.)

Operations were performed in the following cases by Dr. Bigelow:—Abscess of Knee-joint, Necrosis of Jaw, Lupus of Nose and Upper Lip, Felon, Necrosis of Ilium, Necrosis of Femur.

Abscess of Knee-joint.—The rapidity of the disease rendered this case somewhat exceptional. A healthy teamster, aged 27 years, received a blow upon the side of his knee two years ago, which disabled him for a few weeks. One year ago, the knee became painful, but he had worked until three weeks ago, when he entered the hospital. The joint had become rapidly large, fluctuating, painful; and an abscess, which had been opened a few days since, on the outside of the leg over the head of the fibula, was found to communicate with the cavity of the joint. About a month ago, an abscess opened spontaneously about three inches above the one just described.

The probe detected an erosion of cartilage on the inner aspect of the external condyle. The good health of the patient invited, as Dr. Bigelow remarked, an attempt to save the leg. Upon opening the joint, it was found that the cartilage, everywhere roughened, showed only a little erosion, while the synovial borders had undergone gelatiniform degeneration. It was thought that the removal of the cartilaginous surfaces, as usual in excision, by exposing the medullary interior of the bones, would involve a greater risk to the patient than an operation without such removal. The incision across the joint was therefore extended laterally through the ligaments down to the ham-strings of each side, so as to ensure a complete evacuation of the pus, upon which the successful progress of the case would largely depend. The vessels were tied, the leg placed upon a tin excision splint, and the wound left open.

Necrosis of Jaw—in a child eight years old. About one third of the horizontal ramus of the left side was loose, and was removed from the inside with forceps.

Lupus of Nose—in a young female. It had involved the alar margin, the septum and a portion of the upper lip adjoining it. The galvanic cautery was freely applied to the diseased tissue, the patient being etherized during the operation, and the ether remaining about the face and throat protected from ignition by a damp towel.

Felon of Thumb.—Dr. Bigelow remarked that this common lesion was perhaps a more frequent occasion of mal-practice than any other, excepting, possibly, fractures of the elbow-joint. The proximity of the pus to the bone and tendons demanded its early and free evacuation to prevent contraction, caries and deformity. This patient being under ether, he proposed to demonstrate the usual treatment of this affection by physicians, and for that purpose was about to make a puncture a quarter of an inch or less in length, but at this moment it was discovered that some medical gentleman had already made a puncture of this description. The operator then substituted for this medical incision a surgical one about an inch in length, reaching nearly to the extremities of the sinus, as indicated by deliberate exploration with a probe. Such treatment will arrest the lesion, and is peremptorily demanded before the pus has burrowed up the finger. In the palm of the hand, the finger of the surgeon should be introduced for similar exploration, with a view to adequate incision. If, in a hard swelled phalanx, there is doubt about the place where the pus exists, it will often be found beneath the cutaneous abrasion or puncture which frequently gives rise to this affection. Another more infallible indication may be derived from the patient by requesting him to indicate exactly, with the sharp end of a pencil, the tenderest point. A felon cannot be well explored without ether. Dr. B. had more than once known a felon of the finger, inadequately opened, to result in amputation of the arm, while deformed fingers and hands are common.

Necrosis of Ilium—following a railroad injury received two months ago. The superior portion of the crest had been fractured and displaced in the direction of the abdominal cavity, where it had united at an angle. Its feel and outline suggested an additional rib. A sinus, located midway between the anterior superior spinous process of the ilium and the great trochanter, was laid open, some loose bone extracted, and the denuded bed of the sequestra removed by the spherical rasp.

Necrosis of Femur.—The same operation was performed on a young man, who had a sinus on the outer side of the thigh, leading to necrosis; the result of fracture received some years since. H. H. A. Beach.

BOSTON CITY HOSPITAL.

The surgical clinic of Dr. Cheever began on Tuesday, Dec. 2, and will continue through the winter.

A Clinical Conference of surgical cases, to be held every Tuesday at 10, A.M., was initiated. Each student examines a case in turn, and gives a written report of it, which is criticized by his fellow-students and by his teacher.

An interesting case of pistol-shot wound of the base of the skull, involving the brain, was reported on this occasion. The pistol was held in the mouth, directed upward. The ball entered at the junction of the hard and soft palates, and passed upward and backward. There is ptosis of the right lid, and immobility of the right eye; the tongue protrudes to the left; there is left hemiplegia, but no paralysis of the face. Vision, hearing, deglutition and the functions of the bladder and rectum are normal. It is now three weeks since the injury, and the patient is, on the whole, improving. The ball has not been extracted.

On Friday, December 5th, operations were performed as follows:

A case of Suppurating Bubo was incised by Dr. Cheever. The origin of the inflammation was obscure, whether from gonorrhœa or from a chancroid. Dr. C. remarked, with reference to opening such abscesses, that in the hospital, where the patient could have proper care, a free incision is preferable; if the patient were to remain at home, a small opening would be more desirable.

An Ulcer of the Rectum, with Hæmorrhoids, was next shown. The patient was an adult male, who had suffered many months from pain in defecation and from discharge from the anus of pus and a foul thin fluid. No sinus appeared externally. Examination with the rectal speculum disclosed an ulcer on the posterior aspect of the intestine, with a deep sulcus extending toward the coccyx. A number of internal hemorrhoids also came to view; the largest of these Dr. Cheever tied with a silk ligature, first cutting a groove around the base of the growth in which the silk should lie; the smaller, flat piles were touched with strong nitric acid. The ulcer was treated by an incision from its edge downward, dividing the sphincter ani.

Dr. Williams performed Enucleation of the Eyeball in the case of a man who, five weeks before, had received a penetrating wound from the prong of a fork, involving the cornea and iris. The ball was abnormally soft to the touch. In the field of the pupil, a yellow reflection appeared, indicating purulent disorganization of the deep parts. The danger of sympathetic ophthalmia in the other eye indicated the removal of the injured organ. The operation was done without ether, the patient declining anæsthesia. On removal, the globe showed extensive disorganization in the internal parts.

Dr. Thorndike presented a case of Sphacelus of the Great Toe, the result of a neglected injury, with exposure to cold and over-use. The entire toe was necrosed, the line of demarkation being distinct. The advanced age of the patient and his irregular habits, together with ossific deposits in the dorsalis pedis artery, predisposed to gangrene. Dr. T. removed the toe, with the head of the metatarsal bone adjoining.

Dr. Cheever amputated a thumb which, several weeks before, had been bitten by a horse. The soft parts were much swollen, pus had burrowed into the palm as far as the annular ligament, and the middle phalanx of the thumb was fractured. The part was removed at the carpo-metacarpal joint.

Correspondence.

DEATH FROM ANÆSTHESIA.

MESSRS. EDITORS,—Dr. Bigelow's communication, in regard to death from ether, recalls to mind a case reported by Mr. Jonathan Hutchinson, in the *British Medical Journal* for March 8th, 1873. As others may accept his conclusion, that chloroform is the safer anæsthetic for the aged, without noticing how insufficient its foundation really is, perhaps a review of his case may not be out of place.

A man, 84 years old, in feeble health, was operated upon for removal of a cancerous gland under the jaw, on the left side. To prevent loss of blood, the left carotid artery was compressed at the beginning of the operation. He was thoroughly under ether about twenty minutes, and was left by Mr. Hutchinson, without anxiety, with a pulse of 80, face perhaps a little dusky. In three hours, he was seen again; he had got out of bed to urinate, seemed confused, did not speak. Five hours later, unconsciousness was deepening, right arm seemed powerless, left was moved, occasional twitching of right cheek. During the night, he had several convulsive seizures, in which the spasms affected chiefly the muscles of the right side of the face. The eyes were constantly directed to the left. "*Although I much feared that hæmorrhagic apoplexy had taken place, I was not without hope that the symptoms were merely due to prolonged action of the anæsthetic.*" The next evening, the spasmodic twitching extended to the right arm. The second night, they were more severe, and he died forty hours after the operation. At the autopsy, no cerebral lesion was found, except senile atrophy and an old apoplectic cyst on the right side, probably nine or ten years old. Both kidneys were granular; the right was atrophied, and contained a calculus in its pelvis. Mr. Hutchinson says:—"Now, in looking back upon this case, I cannot help suspecting that the anæsthetic was largely to blame for the patient's death."

Unilateral symptoms, resembling those due to hæmorrhage in the neighborhood of the fissure of Sylvius so closely that the surgeon expected to find that lesion, would scarcely be produced by ether after the patient had recovered sufficiently to rise from his bed to urinate.

An embolism of the internal carotid, or middle cerebral artery, would explain all the symptoms. But no such embolism was found. It is not said that the arteries were healthy, but only that they were pervious; neither is any statement made as to the amount of blood in the cerebral tissues.

Anastomoses of the cerebral arteries outside the circle of Willis are either wanting or are very insignificant. Plug up the carotid, and the middle cerebral must be supplied through the anterior and posterior communicating arteries. But the anterior cerebral, posterior cerebral and anterior cerebellar arteries must first be supplied. Little blood could reach the middle cerebral at the best, and if the arteries were atheromatous in this feeble old man, with granular kidneys, the supply would be so much less. The old apoplectic cyst shows that disease of the arteries was probably present.

Cut off from part of a brain for ten or fifteen minutes the supply of blood, and then supply, in perhaps insufficient quantity, a blood impure from the effects of granular kidneys, and the nutrition of that portion must suffer. If tetanic spasm of the arteries follows the diminution of blood, the result would be the more serious.

Here, then, in compression of the carotid is a cause sufficient to account for the symptoms, and, judging from the report of the case, this was the only cause adequate to produce them. The most that ether could have done, was to produce insensibility, and so conceal from the surgeon any shock or other warning of the serious disturbance in the cerebral circulation. Any other anæsthetic would have done the same. When Mr. Hutchinson, from only one case, and that such an one as this, concludes that it is not safe to give ether to aged patients, he reasons illogically, and lays upon that anæsthetic a burden of unjust opprobrium which belongs really to one step of the operation. The sentence italicized would rather indicate that the reason for this is to be found in insufficient knowledge and experience as to the effects of ether.

In this connection, it is interesting to notice that in a brief abstract of this case, given in *Braithwaite's Retrospect* for July, 1873, p. 242, there are three mistakes in three lines:—"Death from *hæmorrhagic* apoplexy occurred *ten* hours after an operation for the removal of a cancerous *submaxillary* gland."

S. G. W.

LETTER FROM "RUSTICUS."

DOWN EAST, Dec. 1st, 1873.

MESSRS. EDITORS,—When I was up your way awhile ago, I was a little struck by the changes since I was there, as a young fellow attending lectures. Not that my time was spent down in North Grove street, but I mean the changes in accommodations for sick folks. Those were what I looked at. You may think it queer, but I didn't go into one of the hospitals or infirmaries. You know, I said I wouldn't. I looked at their outsides, though. That is a curious establishment where Grove Hall used to be. I am told that it is a work of faith entirely. When the doctor started, he only prayed for *something*. Well, three dollars and thirty cents came soon after, and then a bag of potatoes. Some good little boy sent him five cents. He kept on praying, whenever he was short, and just as sure as he did, somebody would send him more money and more potatoes, till at last he has got that big palace of a place.

I couldn't help admiring the perseverance of the doctor, and after I got home, I told a wicked fellow here about it, thinking it might bring him round. What do you think he said about it? "Why," said he, "if he hadn't *told* about his prayers, and *bragged* of how much good they did, he wouldn't have got all those things. It riled up weak folks, and those good little boys and girls that didn't know any better, and they sent him what they were sorry for afterwards." "But, Mr. Ploughsteerer," said I, "we don't care how it was done. The prayer was answered, wasn't it?" He kept quiet for a few minutes, for I had him, sure. But then he put a question to me, and I thought I would send up to you for an answer; for, I declare, he cleared out before I had time to think what the answer should be. Said he, after looking over a copy of one of the reports, "Doctor Rusticus, if that fellow can get his prayers answered, when he asks for houses, and money, and old clothes, and a dozen cookies, and a spittoon, and nine apples, and two baby dresses, and the Sunday School Advocate, and eight quarts of blackberries, and a chemise, and a gallon of milk, and a glass of jelly, and a cake of soap, and a bottle of whiskey, and three old shirts, and six quarts of chicken broth, and a dozen spit-cups, and a blanket, and two quarts of ice-cream, and the 'Silent Comforter,' and one carrot, and a stencil-plate, and a pair of slippers, and five dozen Gibraltars, and one yard of oil cloth, and nineteen bottles of currant wine, and one pot, and a Liberal Christian, and two boxes of Guava jelly, and a barrel of squashes, why in thunder don't he pray to have those sick folks get well, to be a comfort and support to their friends? I'll tell you, doctor, that chap is no fool."

I have seen Mr. Ploughsteerer, as I have been riding by his place since, but I have always been in a hurry.

I had the elegant building of the new Homœopathic College pointed out to me. I am told that they are so distinguished already, by the ability of their professors, though they didn't begin their lectures till the 5th of November, that their fame had reached Constantinople early enough for an inhabitant of that city to get over and study with them, before I left Boston, on the 10th of the same month. You needn't express any doubt about this. One of your Boston papers said so, at any rate.

That school is more liberal than Harvard. One of their circulars, speaking of both sexes, says, "the lectures will be heard in common so far as seems appropriate in the judgment of the Faculty, and separate lectures will be given *when it is deemed advisable.*" I don't think they are quite up to the mark, however, for they say "separate retiring rooms are provided for the use of lady students." Miss Materia M. Forceps says she thinks "this an outrage, coming as it does so near to the Centennial Anniversary of American Independence." Well, Miss Forceps and Mr. Ploughsteerer must keep out of my way. I really have not time for anything but my own business.

Yours, truly, RUSTICUS.

MILK OF MAGNESIA.

MESSRS. EDITORS,—"This preparation is a combination of *pure magnesia* with *pure water*, and is termed, in scientific language, *hydrate of magnesia.*"

The above are the words with which an apothecary's hand-bill, distributed about of late, begins. It is an advertisement of a New York manufacturer, and bears upon it the stamp of a Boston retailer. The whole thing is an absurdity in its statements, as absurd, indeed, as the introduction is erroneous. Magnesia is almost insoluble in water, requiring over five thousand parts of cold water for every part of pure magnesia, and resembling lime, in requiring many more times its weight of boiling water than of cold water. A hydrate of magnesia is a white solid mass and not a liquid.

Messrs. Phillips & Brown will do as well *to invent* a new name.

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Medical Miscellany.

We are unable, on account of sudden demands on our space, to publish two obituary notices which should have appeared in this number.

Dr. Wilhelm Freund has been appointed Professor in the University at Breslau.

A Healthy Village.—The registrar of Howden, Yorkshire, England, states that no death has occurred in the village, which has a population of 2300 persons, since August 17 to the date of report, Oct. 25—more than nine weeks. Only thirty-one deaths were registered during the twelve months ending September 30, or at a rate of 13.47 per 1000. Eleven of the deceased persons attained upwards of 70 years.—*Med. Times and Gazette.*

Damages claimed for Vaccination.—A suit has been brought against the city of New York to recover $10,000, on the ground that a girl, four years old, who had been vaccinated by an agent of the Board of Health, had been thereby inoculated with *scrofula.* At the trial, physicians were introduced to testify that scrofula and other diseases might be imparted through the use of impure vaccine virus. The complaint was dismissed, however, by the judge, who ruled that the city was not liable in the case, inasmuch as the Board of Health, under the present laws, is distinct from the city government.

Anti-opium Pill.—The following formula for an anti-opium pill has been employed for several years in the English hospitals at Pekin, and its efficacy proven in numerous instances:—

℞. Henbane,	gr. one quarter;
Gentian,	gr. one half;
Quinine,	gr. one quarter;
Ginger,	gr. one half;
Camphor,	gr. one half;
Cayenne,	gr. one half;
Cinnamon,	gr. one half.

M. Three pills a day. —*London Druggist.*

Preventive Against Poisoning by Quicksilver.—Since the year 1868, the floors of all the workshops at the looking-glass factory in Chauny have been sprinkled each day with a solution of ammonia. This simple precaution has given to the workmen absolute immunity from all mercury poisoning, while some of the older employés, who had previously suffered from this affection, have since been relieved of all their symptoms.

Caoutchouc Electuary as a Remedial Agent.—Dr. T. R. Varick recommends caoutchouc as a remedial agent, in preference to cod-liver oil, in certain cases of pulmonary tuberculosis, chronic bronchitis, the winter coughs of old people, and in chronic rheumatism. Prepared in the following manner, the dose is a teaspoonful three times a day, about two hours after meals:—

Solution of Caoutchouc.

℞. Caoutchouc (in thin slices),	℥i.;
Ol. terebinth.,	℥ij. M.

Macerate until solution is effected, and strain through coarse muslin.

Electuary of Caoutchouc.

℞. Solut. caoutchouc, ʒij.;
Sacch. alb., ℥iss.;
Mellis (strained), ℥ijss.

This mixture should be of opaque yellow color, and thick enough to run very slowly off a spoon. It contains about two grains of pure caoutchouc to each teaspoonful.—*Medical Record*, Nov. 15, 1873.

Poisoning by Sulphate of Atropia.—The *Lancet* of September 27th gives the case of Dr. Sharpey, reported by Dr. Sydney Ringer. Dr. S., by mistake for quinine, took a solution of sulphate of atropine. He discovered his mistake, but not supposing the dose to be sufficient to poison him, continued his work. This was on Sunday forenoon, and he woke to consciousness on Monday. Many of the usual symptoms of atropia poisoning were present, but the gentlemen in attendance were unable positively to diagnosticate the case.

Novel Use of the Stomach-pump.—In an obstinate case of constipation which had resisted all manner of remedies, it finally occurred to the physician to introduce the pipe of the stomach-pump into the rectum, and make use of the instrument as an aspirator. The result was, at first, a large amount of wind was drawn off, which was soon followed by an extraordinary discharge of fæces. With each stroke of the pump, the abdomen could be seen to diminish sensibly in volume, and complete relief was afforded.—*Il Raccog. Med.* No. xxiii., 1873.

Warning to Mothers.—Sir Theodore Mayence, subsequently physician to James I. of England says "his [the king's] wet nurse was a drunkard, and so, owing to the milk becoming vitiated (though early weaned), he was unable to walk alone before his sixth year."

It is a little curious, but his son, Charles I., did not walk till his seventh year. He was also tongue-tied. The historian does not tell us if the sin of the same wet nurse caused the crippling of the son. It would be queer if the same old tipple caused that tongue-tie.

Rare Tumor of the Upper Lip.—At a recent meeting of the *Société de Chirurgie de Paris*, Dr. Blot exhibited a child, aged 8 months, which had a congenital swelling of the upper lip, the part being four or five times the natural size. In the discussion which ensued, quite a variety of views was elicited as to the character of the enlargement, one surgeon considering it as the sequence of some inflammatory process, and advising partial excision; another regarded the affair as a hæmatoma, likely to disappear of itself; a third was of the opinion that the swelling was a form of elephantiasis, which should be attacked as if it were an erectile tumor, not with the bistoury, but by means of the galvano-caustic. It was remarked that a similar case had been recorded by Holmes, which was thought to have been produced by hypertrophy of the muscular tissue. In this case, however, a portion having been removed, it was found to be made up of hypertrophied connective tissue.

Mortality in Massachusetts.—*Deaths in seventeen Cities and Towns for the week ending November* 29, 1873.

Boston, 151—Charlestown, 15—Worcester, 12—Lowell, 13—Chelsea, 5—Cambridge, 19—Salem, 6—Lawrence, 6—Springfield, 9—Lynn, 11—Fitchburg, 3—Newburyport, 5—Somerville, 5—Fall River, 33—Haverhill, 7—Holyoke, 4—Pittsfield, 7. Total, 311.

Prevalent Diseases.—Consumption, 47—pneumonia, 31—scarlet fever, 20—typhoid fever, 13.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

Deaths in Boston for the week ending Saturday, Dec. 6th, 138. Males, 59; females, 79. Accident, 5—apoplexy, 5—asthma, 1—inflammation of the bowels, 2—disease of the bladder, 1—bronchitis, 10—inflammation of the brain, 1—congestion of the brain, 1—disease of the brain, 6—cancer, I—cyanosis, 1—consumption, 20—convulsions, 5—cerebro-spinal meningitis, 2—croup, 2—debility, 3—diabetes, 1—dropsy of the brain, 2—diarrhœa, 1—diphtheria, 1—epilepsy, 2—erysipelas, 1—scarlet fever, 19—typhoid fever, 4—disease of the heart, 2—hæmorrhage, 1—intemperance, 2—disease of the kidneys, 3—congestion of the lungs, 1—inflammation of the lungs, 12—marasmus, 7—old age, 1—paralysis, 1—premature birth, 4—puerperal diseases, 2—rheumatism, 2—septæmia, 1—whooping cough, 1—unknown, 3.

Under 5 years of age, 60—between 5 and 20 years, 6—between 20 and 40 years, 28—between 40 and 60 years, 27—over 60 years, 17. Born in the United States, 93—Ireland, 37—other places, 8.

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Original Communications.

CASES OF PERIPHERAL PARALYSIS, THEIR CAUSES AND NATURE.

By S. G. WEBBER, M.D.

THE nerves are generally protected from slight injuries by their situation. This is not, however, universal, and several nerves pass near the surface or over the bony prominences, so as to be more or less exposed to injury. Of course, severe injuries may affect nerves as well as other structures. The protection afforded by being on the inside of a joint, as in the axilla, fails in case of dislocation, and the head of the displaced bone may seriously injure the neighboring nerves.

Symptoms arising from pressure vary greatly, according to the severity with which the cause acts and the length of time during which the pressure is exerted. This probably explains a difference of opinion in regard to the causation of paralysis of the radial nerve. Duchenne, in his second edition, recognizes only a rheumatic origin. Panas, in a memoir read in 1871 before the Académie de Médecine and lately published,* refers all such cases to pressure as the cause. Duchenne, in the third edition of his work, refers to Panas's memoir, and says: "I admit that, in some cases, compression of the posterior part of the fore-arm or of the radial nerve should exercise a certain influence; but it seems to me unquestionable that, in the numerous clinical cases which I have observed for more than twenty years (about one hundred), the action of cold has played the chief part in the etiology of this form of paralysis."

The radial nerve is not the only one which suffers from pressure or the action of cold, and it is not unlikely that all such cases agree in symptoms more closely than is apparent from published records, the intensity of some symptoms varying in different cases.

When nerves are divided, the peripheral end and the muscles which they supply degenerate; after reunion of the nerve, restoration, more or less complete, takes place. The electrical reaction of the nerves and muscles suffers a corresponding change, which is characteristic. A few days after the injury, the muscles lose their sensitiveness to the action of the faradic or induced current, and this loss increases until the strongest faradic current, applied by means of moist electrodes to the skin over the muscle or its nerve, no longer excites contraction. When a nerve is entirely separated from its centre, this extreme limit of change is reached within two weeks. In many cases, not all, the reaction of the muscle to the galvanic current is increased, while that for the faradic is diminishing. Later, as the degenerative change in nerve and muscle advances, the reaction to the galvanic current diminishes and finally disappears. With this, there is more or less atrophy of muscles.

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* Archives Génerales de Médecine. Juin, 1873.

When the nerve is restored, the reaction to the galvanic current usually reappears first, then voluntary motion, and, finally, the reaction to the faradic current. This order of return to normal conditions is not invariable.

If only a few fibres of a nerve trunk are injured, only a partial paralysis will follow, unless subsequent inflammation involves the whole trunk. One muscle alone may be paralyzed, or, if there is more than one source of innervation, it may be only weakened, and may still respond to the will and to electricity, though less perfectly than in health. If, instead of division of fibres, there is only a slight injury, every grade of change in their functional relations may be found from normal to entire loss. To this, and perhaps owing to hasty observation, is probably due the difference in opinion to which reference has already been made.

The means by which nerves may be compressed are various: a crutch pressing on the nerves in the axilla is not uncommonly the agent by which the compression is made; a wide board carried under the arm may act in the same way; one writer mentions badly fitting corsets; a dislocated bone, humerus, or femur, or other bone, may press on the nerves in the neighborhood of the joint; certain positions taken by the limbs during sleep, or the pressure of one part on another, as the head on the arm; a bandage applied tightly to a limb,—these are ways in which pressure, sometimes very gentle, but long-continued, may cause paralysis. A fall or a blow may exercise a more violent pressure of short duration, and is not unfrequently the cause of local paralysis and wasting. As the nerve is more severely bruised, and in part or entirely ruptured, compression is rather too mild a term, and contusion describes the injury better; but sometimes it is not easy to decide whether compression or contusion is the better. Often, in such cases, the muscles are paralyzed and suffer atrophy as a direct result of the injury.

That the severity of the cause producing the lesion has a controlling influence over the change in the electrical reaction, is the probable explanation of the difference in the following cases.

Case I.—D. C., aged 23, fell, about seven weeks before I saw him, bruising his shoulder and breaking his collar bone. The deltoid and biceps were extensively wasted; there was inability to raise the arm or to flex the elbow. The muscles of the fore-arm were not affected. The triceps brachialis was scarcely at all implicated. The strongest faradic current the patient could bear caused very little if any contraction in the deltoid and biceps. The skin covering these muscles was very insensitive. The patient was seen only a few times, and gave up the treatment by electricity, saying he did not have time to attend. The atrophy of the deltoid may have been due to direct violence; that of the biceps, and the slight injury to the triceps, were probably secondary.

Case II.—Lizzie B. was first seen early in April. About January 1st, she fell, striking her shoulder. The arm felt lame, but was not very painful. Immediately after, she was attacked with variola, and only three weeks later was it discovered by her physician that the arm was out of place. He replaced it, and the arm remained bandaged for five or six weeks. As nearly as could be learned from her statement, it would seem that immediately after the fall she had some power over the arm, but while sick and before the bandage was put on this was lost and was not recovered. She first applied at the City Hospital as an out-patient, and Dr. Bolles sent her to me.

When seen, the fingers were weak, the thumb and forefinger being weaker than the others. All the muscles of the fore-arm responded, however, to the will. The elbow could be bent and nearly straightened. The only motion of the arm at the shoulder-joint was a slight pendulum-like swing backwards and forwards. The shoulder could be raised a little, as in a shrug. There was a sense of pricking just over the head of the humerus and at the elbow, not in the fingers. There was lessened sensibility over the shoulder and on the outside of the arm. Sensation inside of the arm, over fore-arm and hand was normal. There was a "hard ache" in the shoulder, so severe as to keep her awake at night.

The deltoid, supra- and infra-spinatus, and perhaps the serratus magnus, were atrophied, especially the anterior part of the deltoid, causing the head of the humerus to project so prominently as to raise the question at first as to whether it was in its proper place. All the muscles responded fairly well to electricity, making allowance for their diminished bulk.

Galvanism was used, the positive pole being placed on the back of the neck, and the negative on the nerves, and stroked over the muscles. Passive motion was also used, and she was directed to rub the shoulder. The pain became less, so that she could sleep better. After three applications of electricity, she could use the arm to sew, could pin her cloak, and could raise the arm somewhat from the side.

She attended only very irregularly, being away for many days out of town. The last record was made after nine applications of electricity, more than a month after the first visit. The deltoid had then increased in bulk, covered the acromion and head of the humerus much more than at first. Motion was possible in all directions, but the arm, with fore-arm bent at right angles, could be rotated outwards only about one-half, and could be raised only to a horizontal. She could sweep, sew and iron, but had not strength enough to wash.

It may be a question as to whether the humerus was dislocated, or whether the atrophy of the deltoid caused it and the acromion to become so prominent as to simulate a dislocation; also, whether the restrained position of the arm had any part in the causation of the atrophy. This seems unlikely, as six weeks' disuse and the bandages necessary in case of dislocated humerus would not be likely to affect the deltoid. And she thought motion was lost before the bandage was applied.

While this case was under treatment, I saw another patient, a lady, who, from a fall three months previously, was suffering from inability to use her arm. The same muscles were affected, though the posterior fibres of the deltoid suffered more than the anterior. There were some symptoms of neuritis, and hyperæsthesia over the course of the nerves, with loss of faradic contractility, but preservation of susceptibility to the galvanic current. The treatment was short, owing to removal out of town, and but little advantage was gained from the two or three applications made.

In these cases, the cause was almost identical in nature, but undoubtedly varied in intensity. A similar variety in the symptoms, especially in the electrical reaction of the muscles, is found. In the first case, only seven weeks had elapsed from the time of the accident until I saw him, yet there was extensive atrophy and loss of electro-muscular contractility. In the second case, after three months, the latter was still retained; while in the third case, after three months, it was absent. In all, there was paralysis as a prominent symptom, with anæsthesia in two and hyperæsthesia in one.

Cases of paralysis from dislocation of the humerus are reported in medical writings. I have never seen a case, unless that of Lizzie B. is such. A while since, I was consulted by letter in regard to a patient suffering from such an injury. The deltoid and biceps were most affected, and there was partial anæsthesia over the deltoid.

Cases of paralysis following dislocation of the femur are rare. An interesting case is reported by Onimus and Legros.* A man, 46 years of age, received a mass of earth and stone on his left thigh. There was a dislocation, probably ilio-ischiatic of the femur. There was severe pain, anæsthesia and inability to move the leg. After reduction, the pain ceased, but the numbness remained, and he could not walk. After a slight attack of erysipelas of the face, pain in the leg returned. Five months after the accident, the left leg was found much emaciated, colder to the touch than the other, œdematous, especially around the tibio-tarsal joint. The leg could be feebly flexed and raised, the foot could not be raised nor the toes extended; toes flexed only partially. Sensation was much diminished; pressure was painful. Walking was not possible, and standing was painful. Electro-muscular contractility was very much enfeebled in all the flexor muscles of the leg, somewhat so in the extensors. It was diminished in the muscles of the calf, and gradually disappeared in the peronei and the tibialis anticus and extensor communis. Under the application of the galvanic current, the pain ceased, the œdema disappeared and the patient could walk without a cane.

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* Traité d'Electricité Médicale. Paris, 1872.

A much more common seat of paralysis is the radial nerve. It occurs, generally, during sleep. It is in regard to this paralysis that the difference of opinion between Duchenne and Panas, above referred to, exists.

Duchenne, in his third edition, says that the paralyzed muscles retain intact their electro-muscular contractility, and generally the muscular sensibility is not diminished. Once only has he observed enfeeblement of the cutaneous sensibility in the fore-arm and hand.

Panas also mentions the same characteristics, adding, however, that cutaneous sensibility may be perverted.

In the cases which have happened to come under my care, the electro-muscular contractility, as compared with the other side, has been found diminished when such comparison has been made at a long enough interval after the origin of the paralysis. If the two sides are not compared, the contractility remaining is sometimes so great that it might be considered normal; yet on making the comparison it is found more or less diminished. I have found the cutaneous sensibility for touch and temperature and pain almost always diminished, or perverted, and for electricity sometimes increased. In the cases where the paralysis has been most marked and existed longest, I have been able to see no difference in its nature or quality from that found in the cases due to severe lesion above recorded, excepting that the muscular atrophy was not marked enough to be recognized. Had the paralysis continued longer, it is possible that atrophy might have been found also.

In the number of this Journal for July 6th, 1871, I published four cases of this form of paralysis. In three, the electro-muscular contractility was diminished as compared with the other side; not mentioned in the other. Sensibility was diminished in three, perverted in the other. There was also some œdema of the hand, discolored surface, a mottled appearance and diminished heat as measured by the touch, once by thermometer.

In several cases which I have since had under treatment, the same general characteristics have been observed in regard to sensation, coloration of skin, and apparent temperature. In only one has the electro-muscular contractility, as compared with the other side, been noted; the statement has merely been made that the muscles affected responded to faradization. In one case, it is noted that the muscles moving the thumb and index finger responded poorly to the faradic current, better to the galvanic.

Of the cases first published, in Case I., the paralysis came on while lying with the arm over the edge of a sofa in a drunken stupor; in Case IV., it came on during heavy sleep after great fatigue and a glass of whiskey; in Case III., it came on as the direct result of carrying a basket of lemons on the shoulder and arm, the basket pressing on the outside of the arm, over the course of the radial nerve. Case II. may have been caused by a draught of cold air, in accordance with Duchenne's theory.

In the half-dozen recent cases, the paralysis was first noticed after sleeping. In only two was there any chance that cold was the cause. In one of these, seen in March, the patient said that, being warm, she threw off a part of her covering, but was not aware that she was chilled; she thought she lay on her arm, and slept rather heavily towards morning. The other was very slightly affected, and is for that reason reported.

Case III. Mrs. L. Seen with Dr. Ingalls. Had rheumatism ten years ago, and chronic arthritis since; at times pain in arm, especially during dull days. The joints were rather swollen. Cardiac enlargement with murmurs. The day before I saw her in the evening, she fell asleep in her chair; could not tell on which hand she leaned; slept less than forty-five minutes. On awakening, the left arm felt numb and prickly, and she had lost in part the use of the left hand. The sense of prickling passed off, but the power to use the hand did not return. The back of the hand, the thumb and fingers, were less sensitive than normal, the change being most marked in the thumb. The extensors were weak; pronation and supination were possible; flexion was slightly interfered with, there being a sense of stiffness. The hand was somewhat swollen, slightly congested, but not cold. All the muscles responded to the faradic current.

The effect was so recent, and seemed so slight that only bathing in hot water and friction were advised. Recovery was perfect.

In this case, perhaps, time enough had not elapsed for change in the electrical reaction to appear. Whether pressure was the cause, or cold, it might be difficult to decide; certainly the symptoms resembled those found in other cases where pressure was undoubtedly the cause.

Taking the accounts given by Duchenne and Panas, it will be seen that several of the cases which I have reported differ in regard to the electro-muscular reaction, and all differ in regard to the condition of the cutaneous sensibility.

When a patient is seen the day after the origin of the trouble, it may well be supposed that the electrical reaction of the muscles would be normal, but after a few weeks have passed it would probably be found, on comparing the two sides, that there is, almost always at least, a slight difference. The sensitiveness of the muscles to electrical stimulants varies much in different individuals, depending perhaps upon the amount of adipose tissue, the softness and suppleness, or dryness of the surface, and perhaps, more than all, upon the person's occupation. I have found the greatest susceptibility in teachers of the piano-forte. Hence, if only the affected arm is examined, the electrical contractility may be considered normal, when really it is diminished.

The cases which have come under my observation, where cold could be considered as the cause of the paralysis, were not essentially different from those where it was caused by pressure, unless it be that the electro-muscular contractility was either not affected or not tested as compared with the other side. In a case reported by Rosenthal,* which was probably caused by chill, it was decreased. In a case reported by Onimus and Legro, of so-called rheumatic paralysis of the anterior tibial nerve, it was likewise slightly diminished. In another case reported by them, the electrical reaction of the deltoid was below the normal for the faradic current, increased for galvanic.

It is hardly necessary to multiply instances.

As in all these cases the symptoms are identical, making allowance for variations in the severity with which the injurious agent acted, and the difference of time between the origin of the trouble and the examination, it is reasonable to consider the condition of the nerves, induced by these different agents, the same. It is only another instance where the same pathological condition is produced by different agents.

There is first pain, a peculiar pricking sensation, with this is numbness, and loss of motor power. The pricking sensations pass away, but the numbness and loss of power persist. The limb generally becomes œdematous, has a mottled or purplish color, and is frequently cooler than its fellow. To this may be added, in cases which are not seen soon after their origin, a diminution of faradic contractility in the muscles, sometimes the galvanic current acting more readily than normal. In recent cases, and in cases of slight intensity, some symptoms may be wanting.

A slight neuritis would explain all the symptoms.

The pricking is caused by irritation of the sensitive fibres, the numbness and loss of motor power by impaired conductility due to the inflammation. The œdema and discoloration, and the sinking of temperature, are due to implication of the vaso-motor fibres in the inflammation. The cause being slight, or of short duration, these symptoms are not found in their highest degree of development, and some cases recover easily; others, where the cause acted with more severity, are more protracted, and a few only result in atrophy and permanent disability.

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* Electrotherapie, 2d Edition, p. 269.

Jaccoud, describing the symptoms of neuritis, gives as the principal, swelling of the nerve, no fever, pain following the course of the nerve, even to its terminal branches, increased by pressure, tactile sensibility diminished with persistence of spontaneous pain—painful anæsthesia. In mixed nerves, these symptoms are accompanied with startings and contractions of the muscles, to which soon succeed motor paralysis with loss of reflex movements and of the electric contractility. If the paralysis persists, muscular atrophy, lesions of nutrition, erythema, vesicular eruptions, and, in chronic cases, deposit of pigment and arthropathy. These symptoms are similar to those found in the cases already reported.

It would seem, from the consideration of the cases reported, that Duchenne is wrong in regard to the exciting agent of paralysis of the radial, and that, as Panas contends, it is generally caused by pressure. I cannot help thinking that both are wrong in regard to some of the important symptoms which are present in nearly every case, especially if it is of more than a week's duration. It is hardly necessary to refer to other authors, as these two represent the two phases of opinion, and most others refer to Duchenne. Eulenburg has, however, stated the symptoms correctly, and says that Duchenne is not correct in denying the loss of electro-muscular contractility. He also recognizes pressure during sleep as a cause.

Another cause of neuritis, which is not generally mentioned as such in text books, is overwork.

The following is an interesting case, showing as it does, in a mild degree, all the symptoms usually found in such cases. The patient was sent to me by Dr. Ingalls.

Case IV., Miss E. D., aet. 22, about three weeks before I saw her, while taking care of a brother sick with typhoid fever, noticed a tingling in the fingers of the right hand; they and the hand were also numb. These sensations occurred in the day time; there was no special strain or other cause for them, except the constant labor of nursing. With the numbness, was motor weakness. There was a steady increase of the affection. The pain was worse at night, and for a week began in the shoulder externally, and ran down to the fingers.

Two points could be distinguished as such, 3-8 inch nearer on right than on left back of hand, and on palmar end of right index finger 1-8 inch nearer. Sense of prick was more acute on the right, but the sense of mere contact with a blunt steel was more acute on the left.

There was a tenderness over the nerve, at the bend of the elbow, and over the ulnar nerve. The action of biceps and of the extensors in forearm was not easy, there being a sense of stiffness. The faradic contractility of the extensors of forearm was diminished; the galvanic contractility was increased, the muscles reacting to ten cells on the right, and to only fourteen, or perhaps thirteen, on the left. The flexors were not tested by electricity.

The galvanic current from fifteen cells was used, the positive pole being placed on the back of the neck, the negative passed over the muscles and held quietly over the nerves. After two applications, the faradic contractility of the muscles had improved. On the fourth visit, the sensation on back of the two hands was equal, and the same as it was on the left at the first visit. Ten days after I first saw her, it is recorded that she had no pain in the arm; it was strong and all right.

Soon after, other cases quite similar were seen, one seeming to originate from overwork in nursing, another from overuse of the arm in sewing and playing the piano, with, perhaps, a strain as predisposing cause; two others were from overwork in playing piano. In two cases, the electro-muscular contractility seemed increased on the affected side.

In some of these cases, the affection of the nerve perhaps hardly deserved the name inflammation, possibly congestion would be more correct, there being, indeed, only the first stage of inflammation where several of the functions were increased rather than diminished.

Of paramount importance to the patient is the fact, that all these cases, so far as I know, where treatment has been commenced early and persisted in, have recovered. Where treatment was delayed, the cure was longer in being reached, but generally could be expected. The longest duration was two years before treatment; treatment extended through three months with almost complete recovery.

The treatment consists in the application of either the faradic or galvanic current to the muscles and nerves affected. The galvanic current would probably be found more generally successful in a shorter time, though in many cases the other accomplishes all that is desired.

A few cases, as in Case III., may recover without electricity, but in most cases that agent will at least hasten a cure, and in other cases a cure has not been obtained after a year or more, without the use of the electricity, but followed soon after that agent was employed. It is not, then, always safe to wait for the unaided efforts of nature.

For many weeks past, the British authorities have been busily engaged in fitting out a hospital ship to send to the seat of war on the West Coast of Africa. Probably, before this, the *Victor Emmanuel* has been despatched on her errand of mercy. Originally a war steamship of more than 5000 tons, she was, several weeks ago, placed at the disposal of the medical department of the War Office, with the request that they should signify their wishes as to her equipment. No labor, mental or physical, and no expense have been spared to make the vessel in every respect complete as a hospital ship. She has been fitted by Messrs. Savory & Moore, of London, with a surgery in which is included every facility for dispensing, and also with a very complete operating table.

Progress in Medicine.

REPORT ON SURGERY.

By J. Collins Warren, M.D., Boston.

Pneumatic Aspiration.

The appearance of Dr. Dieulafoy's treatise on the pneumatic aspiration of morbid fluids* enables us to study somewhat more in detail the manner of using the aspirator and the advantages claimed for it as a means of diagnosis and treatment. The peculiarities of this instrument, in which it differs from others intended for the same purpose; consist, first, in the extreme fineness of the needles used for puncture, and, secondly, in the vacuum which is established in the instrument *previous* to puncture. To be properly used, a vacuum must be first created in the body of the instrument, to which the needle and tube must be attached before puncturing the region to be explored. This latter precaution is not always attended to by those not accustomed to its use, and the needle is first thrust in and attached subsequently, a proceeding which naturally sets at naught the peculiar advantages of the instrument. When the needle has passed a short distance through the tissues, the communication between the needle and the vacuum must be opened, thereby transmitting the aspiratory power to the needle itself, which may now be deliberately and cautiously pushed forward in search of the fluid. This, when reached, is instantly indicated by the jet which passes the index and fills the aspirator. Care should be taken not to press the parts to aid the flow, and they should be disturbed as little as possible; when a sufficient quantity of fluid has been removed, the needle should be gently withdrawn, the aspiratory force preventing any drops escaping from its extremity into the surrounding tissues. By observing the various precautions enjoined, the least possible amount of injury is inflicted upon the parts, and Dr. Dieulafoy claims to have "thrust these needles into almost every part of the body, into the joints, the liver, the spleen, the bladder, the intestines, the lungs and the meninges," without ever having seen consecutive accidents. Although time may doubtless prove this instrument to be extremely valuable in the diagnosis and treatment of certain diseases, we doubt if it will meet the enthusiastic and Frenchman-like expectations of its inventor. He states in regard to the value of the method, "by aspirations, therapeutics are simplified; all these different modes of treatment are fused into one; punctures made by means of the trocar, caustics and their eschars, incisions and their pathological sequences are disappearing day by day, and giving place to the aspiratory needle . . . in one word, it is sufficient for almost every need."

Passing over the chapter concerning the treatment of hydatid cysts and abscesses of the liver by aspiration, we come to a subject of more interest to the surgeon, namely, the treatment of retention of urine by this means. The advantages claimed for this method over other methods of tapping the bladder are two-fold. It is said to be both a perfectly harmless and a painless proceeding. The author states: "Its harmlessness does not seem to us so difficult to establish; it strongly recommends itself if, after ninety-eight punctures of the bladder, there is not a single accident to record. . . . In not one of them was found a trace of peritonitis, hæmorrhage, or infiltration of urine; some of them were operated upon two or three times in the twenty-four hours, and for many successive days, without ever experiencing the least morbid symptom."

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* A Treatise on the Pneumatic Aspiration of Morbid Fluids. By Dr. Georges Dieulafoy. Philadelphia: J. B. Lippincott & Co. Pp. 394.

Under these circumstances, puncture of the bladder can be resorted to much more frequently than formerly, and the bladder repeatedly emptied, while the operator proceeds at his leisure to remove the obstruction to the natural flow of urine. It should be performed, the author says, "whenever the first and the second attempt at catheterization, aided by the other usual means, has failed to overcome the obstacle. In cases of retention, both from enlarged prostate and from stricture, catheterization which could not be performed when the bladder was full was easy enough after the evacuation of the urine. It should, therefore, not be kept as a last resort, but should be employed early, rather than aggravate the cause of retention by repeated attempts to enter the bladder through the urethra. The spot chosen for the puncture is the same as that chosen for the supra-pubic puncture; that is, one or two centimetres above the pubes on the median line. Before performing the operation, it is important, as indeed in all cases in which this instrument is used, to assure one's self of the permeability of the needle about to be employed by passing through it a silver thread or a jet of water, as a few grains of rust or dust are liable to block up the opening. Needle No. 1 is the size generally used for this operation, being but one-third of a millimetre in diameter. This needle, attached to the tube of the aspirator, is inserted at the point above mentioned, and as soon as it has penetrated a short distance into the tissues the vacuum is established in it by opening communication with the body of the instrument. The needle is then pushed slowly forward until a jet of urine into the chamber of the aspirator announces the arrival of the point within the walls of the bladder; it must then be introduced a short distance farther, to prevent its being driven out by the contraction of the bladder. So trifling an affair is this operation that the patient can get up and walk about as readily as after simple catheterization.

The success which not only Dr. Dieulafoy, but also many other surgeons, both in this and other countries, have met with in employing aspiration for the relief of retention of urine, together with the advantages it possesses over other methods, are strong arguments in its favor. We believe, however, that one fatal case has been reported as occurring in one of the French hospitals. The needle, owing to certain peculiarities in its make, broke, after piercing the bladder, and a quantity of urine, flowing through the fragment transfixing the wall of the bladder, ran into the peritoneal cavity, causing inflammation and death.

Some cases of spina bifida are given, treated by aspiration, which appears to be a valuable aid in the treatment of this affection.

The treatment of strangulated hernia by aspiration has been pretty freely discussed in the medical journals for some time past, and in a former report we have alluded to cases of this kind. The chapter on this subject is little more than a *résumé* of what has already been given to the medical public. The object is to remove the liquids and gases which distend the intestine; these being, according to Dieulafoy, almost always the true obstacle to the reduction of strangulated hernia. The harmlessness of this puncture has, we think, from the number of cases on record, been abundantly proved. It is advised in all cases, except those of long duration where there is danger of gangrene or intestinal ulcerations, and ought to be performed as soon as the taxis, having been once methodically tried, has failed to afford good results. The plan of operating is essentially the same as that we have already described; the appearance of a thick, feculent liquid indicates that the intestine has been punctured. At the same moment, bubbles of air bursting forth on the surface of the liquid show that gases have escaped. The presence of this gas often diminishes the aspiratory power to such an extent that everything comes to a stand-still, and the instrument must be emptied and the vacuum reproduced in order to complete the operation. A more simple way of effecting the same object, and which, in a number of cases, might be placed in successful competition with the aspirator, is illustrated by a case reported in the *Chicago Medical Journal* for August. A large femoral hernia, three inches in diameter and five inches long, had been strangulated over twenty-four hours; taxis had failed, and an operation was abandoned on account of dangerous symptoms produced by chloroform. The hernia tumor was then punctured by an ordinary subcutaneous syringe, and eight and a half ounces of bloody serum, of a fæcal odor, was drawn off, after which the hernia reduced itself spontaneously. The fluid contents of the strangulated gut were considered by Dr. Knox, the writer of the article, to be largely transuded serum, the result of compression of the veins at the hernial ring. There might be, however, many cases where the fluid needed the persuasion of a vacuum to make its appearance.

The treatment of effusions into the knee-joint by aspiration is considered by the author to be perfectly harmless, his opinion being based upon one hundred and fifty harmless punctures. This confidence in the operation is not, however, shared fully by other French surgeons, who, moreover, are not inclined to admit its superiority as a method of treating this affection. A committee appointed by the Société de Chirurgie to investigate this subject reported that the new method possessed no advantages over the ordinary modes of treatment, and should only be used in those cases of chronic hydrarthrosis where the classical treatment had failed (*Gazette Hebdomadaire*, May 30, 1873). M. Dubreuil, in addition to his fatal case of aspiration for sanguineous effusion into the joint following fracture of the patella, reported, also, a case of death following puncture for the cure of chronic effusion. Add to this a fatal case reported by Dr. MacDonnell, of Dublin, a simple chronic hydrarthrosis resulting in death a week after puncture, and we have sufficient data to make this treatment at least unpopular, if it do not escape total condemnation. Nevertheless, we find that in one case puncture was performed without accident of any kind, thirty times, and cases are given where the patient is allowed to walk home immediately after the operation. The success of the author's treatment is thus described: "Experience has demonstrated that a certain number of large, painful hydrarthroses, of some days' standing, give way rapidly after one or two aspirations followed by compression. In other circumstances, the treatment lasts twelve or fifteen days, and in rare instances attains to three weeks." The author recommends an India-rubber or linen bandage to be applied to the joint, giving uniform and continuous pressure, the point selected for puncture being left exposed. This is usually the outer synovial cul-de-sac, at the level of the upper extremity of the patella and at about two centimetres outside that bone. The point of puncture may be sealed with collodion for precaution's sake, and firm pressure is then applied to the joint by thick wadding and bandages, and the leg should be kept in such a position as to have the foot slightly elevated. There are two striking points in the collection of cases given, namely, the apparent harmlessness of the treatment, and the rapidity of the cure.

Under the head of treatment of effusions into the cellular tissues, we find several cases of psoas abscess connected with disease of the vertebræ where aspiration was successfully employed. In those cases which we have seen, aspiration of any considerable amount of fluid has been impossible, owing to the blocking up of the instrument by the large amount of débris which these abscesses contain.

Hæmorrhage during Operations.

Prof. Esmarch, the well-known surgeon of Kiel, has given us in No. 58 of Volkmann's *Klinischer Vorträge*, an interesting account of his method of preventing hæmorrhage in operations upon the extremities. It consists in bandaging the limb with an elastic bandage, from its extremity to a convenient point above the part to be operated upon, sufficiently firm to empty it completely of the blood which it contains. Immediately above the portion which has thus been deprived of its blood, a tourniquet in the form of several turns of India-rubber tubing is applied, which effectually prevents any return of the blood to the emptied part, after the elastic bandage has been removed, and possesses a great advantage in being applicable to any portion of the extremity. The limb thus so effectually deprived of blood, enables the surgeon to operate as conveniently, as far as hæmorrhage is concerned, as upon the dead subject. The advantages of this proceeding are particularly well shown in a case of extensive necrosis of both tibiæ, of long standing, the operation for the removal of the sequestra being described at length. Both legs having been completely deprived of blood to a point just above the knee, where the rubber tubing is firmly applied, the dead portions of bone were simultaneously removed from both tibiæ by Dr. Esmarch and his assistant, without the loss of so much as a drop of blood, a matter of no small advantage to the patient, who, although much broken down by the disease, recovered rapidly from the effects of the operation.

This method can be employed in amputations and all other operations on the extremities, and also in operations upon the male genital organs. The surgeon is enabled not only to operate with greater facility and fewer assistants, but can also distinguish much more readily the diseased from the healthy parts.

Dr. Esmarch suggests that, in bloody operations upon the trunk, neck and head, the India-rubber tourniquet may be applied to all four extremities, which could then become reservoirs of blood to be drawn upon in case of excessive hæmorrhage. Although it might be thought that serious disturbances in the circulation and innervation of the limb might result, no accident of this kind has occurred in a large number of operations in which this method has been employed, although in some cases the blood was withheld for over one hour. It would not be advisable, however, to attempt this in parts infiltrated with foul pus, for fear of septic infection.

Professor Billroth has also operated in this way in a large number of cases, and appears much gratified with the result. Esmarch's method has, indeed, been pretty generally adopted throughout Germany, where, until the present time, but few attempts to prevent hæmorrhage in this way have been made. As long ago as 1853, Langenbeck was in the habit of bandaging the limb with an ordinary roller bandage, and applying the tourniquet previous to amputation; but later, he has abandoned it, and of late years it has been the almost universal custom in Germany, as in many other countries of Europe, to apply merely digital compression to the artery in amputations. Previous to Esmarch's attempts, the elastic bandage had never been used for such a purpose. We are somewhat surprised at the amount of comments which this article has excited, for we had supposed this method of saving blood had been much more extensively employed than it seems to have been. It has been the custom at the Massachusetts General Hospital, for over twenty years, to apply a roller bandage firmly to the limb, from the tip of the foot up to the tourniquet, previous to an amputation, when it was desirable to economize blood. An ordinary linen or cotton bandage has answered the purpose quite as well as Prof. Esmarch's elastic bandage, and has the advantages of being always obtainable and much cheaper. The use of the bandage applied in this way has not been confined to amputation, but has been used in operating for necrosis, in resections, in exploratory incisions, both in the arm and leg. In place of the India-rubber tubing we have the metallic hospital-tourniquet, by far the most durable and convenient instrument of the kind we have seen. The method has, however, been, of late years, confined chiefly to amputations. Much the same plan has been advised by Erichsen, and we are inclined to think that it has been much more extensively resorted to, both in this country and in England, than has been supposed.

Prof. Verneuil, also, has busied himself of late, in attempts to reduce hæmorrhage to a minimum in certain operations. He has devised a new method of amputation, calculated, he thinks, to do away with arterial compression, whether by fingers or tourniquet, which he considers an exciting cause of phlebitis and sloughing of the integument from pressure, especially in patients who are fat. The portion to be amputated is treated very much as a tumor would be. When antero-posterior flaps are formed, a common bistoury is all that is required for incising the soft parts, which are divided in successive layers, the bloodvessels being tied as they are met with and before being divided. Veins, as well as arteries, are closed with ligatures. The bone is divided as in the usual methods. When the principal bloodvessels are so situated that they can be included in one of the flaps, it is the practice with Prof. Verneuil to divide the bone before forming this flap. Twenty-one cases are reported as having been operated upon by him in this manner, viz.: Eight disarticulations at the shoulder, three amputations of the thigh, two amputations of the arm, six amputations of the leg, and two coxo-femoral disarticulations. He recommends this method as having the advantages:—1. Of enabling the surgeon to operate with fewer assistants; 2. The avoidance of hæmorrhage; 3. Obviating the risk of phlebitis from pressure necessary to control hæmorrhage *(Gazette Médicale de Paris)*. We can conceive of this method being of advantage when the surgeon has no skilled assistance at hand, but in no other case could the advantages offset the tediousness and bungling character of such an operation, which, moreover, would be likely to leave a jagged and unsurgical wound in the stump.

Professor Verneuil claims also to have devised a method for preventing the entrance of blood into the buccal cavity during resections of the maxillary bones, thereby doing away with the necessity for performing tracheotomy to prevent hæmorrhage into the trachea. The important point in this method consists in reserving the incisions of the mucous membrane of the buccal cavity until the last moment. A large tumor, of the size of two fists, growing from the horizontal ramus of the inferior maxilla, was removed in this way. An incision having been made along the inferior border of the bone, the tumor was thoroughly exposed by dissecting up the anterior and posterior flaps, the mucous membrane being left intact. Two small apertures were then made in the mucous membrane, at the anterior and posterior extremities of the diseased bone, and a chain saw having been introduced at these points, the bone was resected. The écraseur then separated the tumor from the base of the tongue, the chain being introduced through the holes made for resecting the bone. This left the growth hanging from the cheek by the anterior fold of mucous membrane, the division of which completed the operation.

In resecting the superior maxilla, M. Verneuil makes a V-shaped cut through the outer integument, the apex of which is near the ala of the nose, while the branches include the borders of the malar bone. This flap is reflected, and before dividing the bone at any point, the nasal fossa of the corresponding side is plugged. The malar bone and the ascending branch of the maxillary bone are next divided by bone forceps. The palatine portion is then divided by powerful bone forceps, and the final step in the operation is to separate the hard from the soft palate. In this way, hæmorrhage into the buccal cavity is prevented until the last stages of the operation.

A case of amputation without hæmorrhage is reported in the *American Journal of the Medical Sciences*, by Dr. E. P. Sale, where nature provided against bleeding in her own way. The patient, while chopping wood, nearly cut off his foot at the tarso-metatarsal articulation. He suffered so much from shock and hæmorrhage that amputation was postponed a week, when the part of the foot beyond the wound became gangrenous. Amputation was performed just above the ankle; no hæmorrhage followed the operation. The patient recovered without an unfavorable symptom. It was accounted for by thrombosis of the various arteries, brought on "by anæmia, which rendered the blood hyperinotic, as in the formation of heart-clot after a profuse post-partum hæmorrhage."

Bibliographical Notices.

Du Traitment des Rétrécissements de l' Urèthre par la Dilatation progressive. Par T. B. Curtis, Docteur en Médecine de la Faculté de Paris, etc. etc.

This work, to which was awarded the Civiale prize for 1872, is likely to be of great benefit in recalling to the profession the value and importance of the treatment of stricture by gradual dilatation. In the introduction, the author disclaims any attempt to decry urethrotomy, a proper operation in certain cases; he only intends to describe, minutely and at length, the method of progressive dilatation. Progressive dilatation of strictures is effected by the introduction of proper bougies or sounds of a regularly increasing calibre. In the introduction of any instrument into the urethra, we have to consider whether it shall be withdrawn at once or allowed to remain a longer or shorter time. The method of treating a stricture, by passing a bougie and at once withdrawing it, and at the next sitting passing a larger one, and so on, is called *dilatation temporaire,* or *interrupted dilatation.* The method of treating a stricture by allowing a bougie to remain several days, more or less, in the urethra, and then replacing it by a larger one, is called *dilatation permanente,* or *continued dilatation.* The author does not mean to include in his subject the treatment of strictures by *sudden* dilatation, whether after the method of Perrève, Holt, Voillemier, or Thompson. All of these methods belong to the treatment by *violence,* and not *gentleness.*

Chapter II. contains an interesting historical account of the treatment of stricture. The instruments for the interrupted dilatation, or occasional dilatation *(dilatation temporaire),* are bougies with a conical end, terminating in a small, olive-shaped bulb. The rules for proceeding to dilate a stricture are given very minutely and carefully, and will well repay perusal and observance. In the continued dilatation *(dilatation permanente),* the instruments used must be of good manufacture, in order to withstand the corrosive action of the urine. The method of retaining the instrument in the urethra, by tying it to the hairs of the pubes, is described and figured. This method is very convenient, and was employed by the writer of this review more than twelve years ago. The instrument should not be passed into the bladder, on account of the vesical irritation it might cause. During the treatment by continued dilatation *(dilatation permanente),* the patient will keep his chamber, if not his bed. When the urethra will admit a bougie of the calibre of No. 12 or 14 of the French scale, continued dilatation can be omitted, and the interrupted or occasional substituted. The theories of the action of bougies are discussed in Chap. V. In Chap. VI., is a detailed enumeration of the symptoms, serious and slight, that dilatation may cause. The author considers occasional dilatation *(dilatation temporaire)* as the best method of treating all simple cases of stricture.

In the last chapter, the indications for and against the methods of dilatation are considered, and the history and treatment of four cases are given at length. The work closes with a table of seventy cases of stricture, treated at the Necker Hospital; the age of the patients, the mode of treatment, and the calibre of the urethra at the beginning and end of treatment, are given. This table is interesting and valuable. On the whole, this prize essay by Dr. Curtis will commend itself very favorably to the profession.

Transactions of the Medical Society of New Jersey, for the year 1872. 8vo. Newark: 1872. pp. 310.

The 106th annual session of the State Medical Society of New Jersey was held at Paterson. The President, Charles Hasbrouck, M.D., delivered the annual address, his topic being the personal relations of the profession to quackery. He showed that, in consequence of the traditional prejudices of medical men against the popularizing of medical knowledge, we are ourselves to be regarded as responsible in a measure for the existence and success of homœopathy, Thompsonianism, and other forms of quackery. The popular ignorance of which Dr. Hasbrouck complains, and which tends to the promotion of quackery, is not so much the want of a thorough acquaintance with the principles of medicine as a science, and its details as an art, but the absolute and profound ignorance of everything relating to medicine; ignorance, not only of what is known, but ignorance, also, of the fact that there is much in medicine that is not known. A familiarity with a few of the leading general principles of our art would enable the public to discriminate intelligently between the educated and conscientious physician and the irregular and pretentious charlatan. The address forms a carefully-prepared, able paper, which we would recommend to the attention of the general reader as well as to physicians.

Medical men interested in the history of the Hunterdon District Society, will find that subject exhaustively treated in 123 pages of this volume, in the course of which the lives of many of the deceased local celebrities of that section are minutely detailed, the epitaphs on their tomb-stones being introduced as far as practicable.

Dr. G. H. Harrison read a paper on the "Diseases prevalent in the Valley of the Delaware." We are at a loss to determine why this paper should be pretentiously called an "Essay," a term which is commonly employed to designate the thoughts of a writer on any given subject, but in elucidation of some theory or doctrine. If the barren description of the prevalent diseases of any locality can be called an essay, the term might with equal propriety be applied to Worcester's Dictionary.

The remainder of the volume is made up of the reports of the various standing committees, on the health of the different counties, interspersed with the history of several cases of more than ordinary interest.

BOOKS AND PAMPHLETS RECEIVED.

Nature Series. Origin and Metamorphoses of Insects. By Sir John Lubbock. London: Macmillan & Co. 1874. Pp. 108.

Transactions of the New Hampshire Medical Society. 1873. Pp. 120.

A Handbook of the Theory and Practice of Medicine. By Frederic T. Roberts, M.D., M.R.C.P. Philadelphia: Lindsay & Blakiston. 1874. Pp. 1052. (For sale by James Campbell & Son.)

Boston Medical and Surgical Journal.

Boston: Thursday, December 18, 1873.

Of the many distinguished men who have passed away during the year now at its close, the greatest has been reserved for the last. Louis John Rudolph Agassiz expired at Cambridge, after a short illness, on the evening of Sunday, December 14th, in his sixty-seventh year. Though many equally distinguished remain, there is probably no one who has been familiarly known in so many countries, and whose death will be so universally deplored throughout the civilized world. Agassiz was born in 1807, in Switzerland, in the parish of Mottier, between the lakes of Neuchâtel and Morat. During his boyhood, he was remarkable for scholastic learning as well as for the study of plants and animals. When only seventeen, he began at Zurich the study of medicine, which he pursued at Heidelberg and at Munich, where, in 1831, he obtained the degree of M.D. His life as a medical student appears to have been protracted by the interest he took in kindred branches of science, and particularly by the time given to assist Martius in the ichthyological part of his work on Brazil, and later, to write his own work on the "Natural History of the Fresh-Water Fishes of Europe." In 1832, he was appointed Professor of Natural History at Neuchâtel, where he remained fourteen years, with the exception of the time given to some journeys. It was here that he conceived and elaborated the idea of the "glacial theory," with which his name will be forever associated. He came to America in 1846, when in the prime of life, with a large stock of experience, and with his abilities fully developed, while his force and enthusiasm were unabated,—the latter, indeed, only left him with life. The business on which he came being despatched, he decided to remain, influenced chiefly by the offers of Professor Bache, of the Coast Survey, which enabled him to study the marine fauna all along the shore. The next year saw the foundation of the Lawrence Scientific School, at Cambridge, where, having accepted the Professorship of Zoölogy and Geology, Agassiz made his home for the future. Since then, his life has been one of constant study and of work at its great object, the Museum of Comparative Zoölogy, which, though yet in its infancy, is already a noble monument to his memory. His most important journeys have been that up the Amazon some eight years ago, and the "Hassler Expedition" in 1871–2. The opening, last summer, of the School of Natural History at Penikese is too fresh in the minds of all, to need more than a passing allusion.

Professor Agassiz has of late been prominent for his steadfast opposition to the Darwinian hypothesis. This is not the place for any discussion of the theory, but even his opponents must admit that to face the general, reckless enthusiasm with which the theory has been received in this country, to maintain that the evidence advanced was not only insufficient, but unfounded, was the part of a bold and able man. His course could not fail to be offensive to many, especially to those with minds of such peculiar precocity, that when scarcely beyond boyhood, they are certain that one of the most intricate theories ever advanced does not admit of a moment's question. The coming number of the *Atlantic Monthly* will contain the first, and unfortudately the last, of a series of papers in which the Professor meant to define and maintain his position in this controversy. Professor Agassiz was celebrated for his amiability and charming personal qualities, which he possessed to a degree which is rarely joined to such indefatigable perseverance and steadfastness of purpose as his. Unsparing of himself in his work, he was an exacting leader, but a sympathetic and encouraging instructor. His death leaves a place vacant in the scientific world and in the community, which it will be difficult to fill.

CANUET, MOUTARD-MARTIN, AND OTHERS ON THE TREATMENT OF ASTHMA BY BATHS OF COMPRESSED AIR.*—A paper was read by M. Canuet, at a recent meeting of the Therapeutical Society of Paris, on a case of humid asthma of eighteen years' standing, and due to a severe double broncho-pneumonia, which was cured by means of the compressed air-bath, and the paper was followed by an interesting discussion. [This plan of treatment of certain respiratory diseases has an obviously scientific basis, if properly studied and applied, but, so far as we know, has been little if at all tested by practice in this country.—ED. M. R.] At first the fits occurred at irregular intervals, as much as six months sometimes elapsing between them. The spasmodic character of the fit was well marked, and after several days of severe spasm this would give place to severe catarrh. After about ten days, the attack passed away, the respiration became normal, and there remained only a little grey morning expectoration. The catarrh gradually increased, and great benefit was derived from two visits to the waters of Cauterets. Eight years from the development of the malady, the catarrhal susceptibility became extreme, and every month there were one or two attacks, generally lasting ten days. The patient now was troubled with flatulent dyspepsia, and became very anæmic. A third visit to Cauterets, and subsequently one to Eaux Bonnes, were alike unproductive of relief. It was observed that, as the malady became chronic, the spasmodic element became less predominant, and that, too, before the administration of such remedies as arsenic and the iodide and bromide of potassium.

It was under these conditions that the compressed air-baths were first tried in October, 1871, under the direction of M. Leval-Piquechef. During the first trial, with a pressure of 7 centimetres (3·36 inches) of mercury, the pulse ranged from 72 to 80, and the respirations were 18 in the minute. Gradually, the bath being taken daily, the respirations diminished; and at the twelfth sitting, under a pressure of 7 centimetres, they had fallen to 9. The appetite and strength improved. During the treatment, the attacks that did occur were milder.

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* Gazette Médicale de Paris, May, 1873.

At the thirtieth sitting, with a pressure of 15 centimetres, the pulse fell to 68, and the respirations to 6. In ordinary air the numbers were 76 and 18. After three series of thirty baths each, ninety in all, the general state was very satisfactory; appetite and sleep returned. Considerable atmospheric variations, cold and thaw following, were passed through without annoyance; a little bronchial expectoration in the morning being the only remnant of the asthma.

With respect to the mode of operation of the compressed air, it is hardly probable that the good was done by mere mechanical pressure of the air, which rarely was 20 centimetres over what is normal. It seems that we look to the oxygen as the active curative agent. Increased supply of oxygen, without increase of atmospheric pressure, has proved beneficial in the spasmodic complications of anæmia and chlorosis.

Placing patients in a bell-chamber was observed to overcome the paroxysms of whooping cough when the disease was in its decline.

In the description in the paper, M. Martineau mentioned the success of the compressed air-bath in simple uncomplicated chlorosis obtained by M. Journadet.

The Hospitals.

MASSACHUSETTS GENERAL HOSPITAL.

(Saturday, December 6, 1873.)

OPERATIONS were performed in the following cases:—Abscess of Gluteal Region, Fistula in Ano, Tumor of Leg, Gun-shot Wound of Hand, Hare-lip, Fistula of Thigh and Groin.

Abscess—in an adult. One year ago, while shoveling, the patient sprained his hip, and had suffered pain and tenderness at a point corresponding with the sacro-iliac synchondrosis. There is, now, swelling and deep fluctuation at the point described. Dr. Bigelow punctured the most prominent part with a trocar, and then freely laid open a cavity, two inches from the surface, by a T incision through the overlying integument and gluteus muscle, evacuating about three ounces of pus. The finger reached a small aperture, which passed within the pelvis near the sciatic ligament.

Fistula—in a man, and quite superficial. Dr. Cabot passed a probe into it, dissected out the fistulous tract, and united with stitches the wound thus made.

Myxo-sarcomatous Tumor of Leg.—The patient was a man of about 50 years. Eight months ago, he bruised his leg, and a growth, of the size of a pea, soon after appeared at the contused point. This increased slowly, with some pain, until September last, since when it has rapidly grown to its present size. Within a week, ulceration had commenced, which, on Thursday, was the seat of hæmorrhage to the amount of a pint. The tumor, situated on the middle of the inner side of the right leg, was prominent and almost spherical, of the size of an orange, nodulated upon its surface, very elastic and firmly attached at its base, involving an apparently enlarged saphenous vein, which was indurated above and below the growth, and, as Dr.

Bigelow remarked, considering the varicose condition of the other leg, it suggested a tumor originating in varix and mainly composed of coagula. As usual, the leg was bandaged from toe to hip, the tourniquet applied and the bandage removed. A straight incision of five inches was made, turning out a good deal of coagulum. The operator then readily detached, with the finger, from its bed in the muscles, an opaque, soft, sarcomatous tumor, and subsequently dissected from the adjoining skin and intermuscular spaces, an almost equal amount of myxomatous, slimy, jelly-like material, the convoluted outline of which, following the muscular interstices, had resembled, as above stated, inflamed varicose veins, although it proved to be transformed connective tissue. Immediate microscopical examination of the growth confirmed its myxomatous character. The disease, though carefully removed, would, Dr. Bigelow stated, be very sure to return locally.

Gun-shot Wound of Hand.—A young adult had been wounded in the palm of the hand with a buck-shot fired from a pistol. Prolonged search, by Dr. Cabot, failed to discover the foreign body. A counter opening was made at the wrist, to ensure adequate drainage of pus.

Hare-lip—in a baby. This was single, complicated with cleft palate, and extended into the nostril. Dr. Bigelow operated by the method described in a previous report,[*] and afterwards placed upon the cheeks, to prevent their retraction, an hour-glass shaped adhesive plaster united across the lip by a long and very narrow band. The hardened lymph accumulates under this band, and, pressing upon the cicatrix, generally requires its renewal on the third day, to prevent ulceration. Union depends largely on the plastic power of the subject, and, in case of failure, the child should be sent home, to return when in better health.

Sinuses of Thigh and Groin.—The result of an old abscess. These were thoroughly explored by Dr. Cabot, but found to be unconnected with bone.

H. H. A. Beach.

BOSTON CITY HOSPITAL.

Last Friday, December 12, operations were performed as follows:—

Dr. Thorndike excised an Epithelial Cancer from the lower lip of a man sixty years old. The patient had for many years used a clay pipe in smoking. The disease began ten years ago as a warty growth, and had developed until two-thirds of the lip had become involved. The diseased part was removed by a V-shaped incision.

To restore the lip, after this extensive loss of substance, Dr. Thorndike performed a plastic operation as follows. He made an incision through the skin and muscles of the cheek, extending, from the angle of the mouth, two inches, directly backward; thence the cut was carried at a right angle, downward, one inch. The incision divided the tissues of the cheek down upon, but not through, the buccal mucous membrane; from the inner surface of the upper flap of the cheek, this mucous membrane was dissected to a third of an inch in width, and was then divided, thus forming a part of the lower flap. The lip was dissected from the lower jaw sufficiently to allow of easy adaptation of the parts, and the two arms of the V-shaped wound were apposed and held in place by silver-wire sutures passed deeply. The long incision in the cheek became by this means a part of the lower lip, whose mucous covering was supplied by the membrane dissected from the cheek. The operation was completed by adjusting the edges of the wound with silk sutures, and by stitching the fold of mucous membrane to the outer margin of the new lip.

Dr. Thorndike remarked that this operation not only restored the shape of the mouth very perfectly, but gave a chance for healing without tension on the parts.

A Secondary Growth of Scirrhous Tumor of the Breast was removed by

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[*] Journal, Nov. 6, 1873. Page 463.

Dr. Thorndike. The last operation was performed a year ago. Soon after the wound healed, the disease returned in the upper part of the cicatrix and had developed until, at present, a movable growth of the size of a large orange involved the tendon of the pectoralis major muscle. No glands in the axilla showed the invasion of the disease, and the internal organs appeared to be healthy.

On Tuesday, December 9, Dr. Cheever performed, before the medical class, the operation of Tenotomy of the Hamstring Tendons. The patient was a girl, twenty-five years old, who had, on the right side, talipes varus and contraction of the knee; on the left, talipes valgus, which was relieved by apparatus. Dr. Cheever proposed to treat the knee first, and afterwards to cut the tendons which were involved in the varus. The tendons of the biceps, semi-membranosus and semi-tendinosus were divided. Extension by weight was to be applied on the fourth day.

Dr. Cheever amputated the last phalanx of a finger affected with Onychia Maligna, of several years' duration. He remarked that removal of the whole diseased tissue, including the matrix, down to the periosteum, was sometimes successful. In the case of this laboring man, amputation was the speediest and surest.

Perineal Section was performed in a case of Rupture of the Urethra, with Extravasation of Urine. A boy, fifteen years old, fell on his perineum on the evening of the 7th, two days ago. The patient now presents a distended bladder, with great œdema of the penis, scrotum and perineum. A large, black slough covers the perineum. The thighs and abdomen are a little infiltrated. A few punctures in the œdematous prepuce gave exit to a fluid smelling like urine.

Dr. Cheever slit up the prepuce, and tried several catheters in the urethra. None passed beyond the bulbous portion. A large incision was carried down the middle line of the perineum, from the scrotum to the sphincter ani. The point of an elastic bougie in the urethra was immediately felt and brought out of the wound. The cavity under the arch of the pubes was filled with clots and sloughs. A careful dissection reached the membranous urethra, the knife being pushed in under the pubes, guided by the finger in the rectum. A great quantity of clear urine was drawn off, and a large elastic catheter, carried through the perineum, was fastened in the bladder. Free incisions were made in the scrotum and penis.

Correspondence.

ANÆSTHESIA IN EUROPE.

MESSRS. EDITORS,—At the present juncture, when the relative merits of ether and chloroform as anæsthetic agents are being widely discussed, it may be somewhat interesting to notice certain equivocal points connected with the theory and practice of chloroformization, and particularly to call attention to the manifold contradictions with which the whole subject of anæsthesia is beset in standard European works. Among those who practise and uphold etherization, great unanimity may be said to exist on all important points; the laws of etherization as set forth by Prof. H. J. Bigelow (Boston Med. and Surg. Journal, Nov. 20, 1873) form a code of clear, simple rules, easy to understand and to follow, and from which few will dissent. With chloroform, the case is very different; a few leading examples, taken almost at hazard, and representing the best contemporary practice in England and France, will show immediately how little agreement exists on such all-important points as the degree of safety of the use of chloroform, the nature and mode of action of the dangerous properties which even its advocates almost universally admit it to possess, the counter-indications to its use, the premonitory signs of danger and the efficacy of restorative measures in case of accident. It is evident that such equivocal testimony and divergent opinions as we shall have occasion to record must point to a degree of uncertainty and insecurity attending the use of chloroform which contrasts very unfavorably with the simplicity of the theory and practice of etherization.

As regards anæsthesia, European surgeons may be pretty fairly divided into two classes: those who have never yet met with a death from chloroform, and those, less numerous, whose practice has not been equally fortunate. The first are naturally *optimists;* they take a very confident view of the innocuity of chloroform, which they say is "free from danger if properly used" (Lister, in Holmes' System of Surgery, vol. v. p. 496), and preferable to ether on the grounds of less odor and bulk, and greater power. With those who take this sanguine view, hardly any counter-indications to anæsthesia can be said to exist: cardiac disease, for instance, is held rather to indicate, than debar from, the use of chloroform (Syme, Lister); the same is true of collapse following severe injury and gun-shot wounds (Lister, Longmore in Holmes's Surgery, vol. ii. p. 244). Should danger impend, it may be recognized in time, some say by the state of the pulse, others by the respiration, and forestalled by simple and efficient measures, so that a fatal result must be due to carelessness or inexperience.

Those, on the other hand, who have once experienced the shock of seeing a patient pass under their hands from sleep into death, take a wholly different view; they are *pessimists*, not only as regards chloroform, but all anæsthesia. They fully admit the noxious qualities of chloroform, which may be manifested in a variety of ways, and at all stages of anæsthetic action; the fatal accident is generally supposed to take the form of *syncope*, due to direct myo-paralysis of the heart (Snow on Chloroform, &c., Gosselin, *Clin. Chir.* p. 22), or to paralysis of the medulla oblongata (Lallemand and Perrin, Gosselin, Guyon), or to some as yet incomprehensible agency (Giraldés, *Dict. de Méd. et de Chir. Prat.*, vol. ii. p. 247); others attribute the fatal result to *asphyxia*, caused by centric paralysis (Gosselin, Lister), or by laryngeal spasm (Devergie, Black), or by falling back of the tongue (Hergott, and many others). Besides all these noxious modes of action, which are more or less dependent on an *over-dose* of the drug, and which can be at least understood, if not foreseen and even sometimes forestalled, the advocates of chloroform are obliged to admit the existence of other rarer forms of fatal toxic action, as the "congestive form" of Gosselin (*loc. cit.*, p. 24), in which neither syncope nor asphyxia are recognizable, or that inscrutable form of sideration which depends for its manifestation on the so-called "*chloroformic idiosyncrasy*" of Robert (Lister, Gosselin, Guyon); this unfortunate predisposition to sudden death under chloroform offers no sign by which its existence may be even suspected; it is invoked in order to account for cases where chloroform kills suddenly, without warning, and irrespectively of the dose inhaled, often in trivial cases, where only partial anæsthesia had been attempted (see Lister, *loc. cit.*, p. 485, Giraldés, *loc. cit.*, p. 248). To complete this long list of death-producing agencies, we venture to suggest that asphyxia by suffocation (according to the mechanism set forth by Dr. Bigelow in his comments on Dr. Lake's case) be added, as likely to have been possibly overlooked in some cases of supposed chloroform poisoning.

Is the peril in any known proportion to the amount of chloroform inhaled? According to some authors (Giraldés, p. 244) in the majority of fatal cases, the dose had been very small, often, apparently, insignificant, and certainly quite insufficient to procure the benefits of anæsthesia (fifteen drops, a coffee spoonful). Lister, however, says that except for those rare cases of death which we must attribute to the "chloroformic idiosyncrasy," "the explanation must be found in an over-dose of this potent narcotic from too long-continued administration" (*loc. cit.*, p. 488). He, nevertheless, admits that in a considerable proportion of cases "death has taken place suddenly, at the commencement of an operation with imperfect administration of chloroform, which stands to the fatal event in the relation of an accident concomitant (?) or rather a preventive insufficiently used" (p. 484). What conclusion can we allowably come to from these conflicting statements? Should the chloroformist aim at producing the full narcotic and anæsthetic action of chloroform, or is it safe for him to limit himself strictly to the production of insensibility to pain?

Such manifold perils being admitted to exist, the pessimist is naturally led to recognize numerous *counter-indications* to the exhibition of chloroform; cardiac disease, which the more fortunate Lister considers to be rather an indication than otherwise, is with him the first among the counter-indications (Gosselin, Guyon, Giraldés); others are chronic alcoholism (Nélaton, Guyon, Gosselin); debility consequent on hæmorrhage or anterior disease (Gosselin, Giraldés); intense mental excitement at the moment of injury (Giraldés); collapse following severe injury, or even the unapparent shock, produced by a simple dislocation (Gosselin, *loc. cit.*, p. 18). By strict obedience to these many counter-indications (our knowledge of which is still incomplete, says Prof. Gosselin), the perils of anæsthesia by chloroform may, to a certain extent, be avoided; but, even though these numerous restrictions to anæsthesia be complied with, the chloroformic idiosyncrasy may yet make itself apparent by the sudden death of the patient, however satisfactory a subject he may have appeared before being put to the test.

How may the approach of danger be recognized, in cases where death does not occur altogether without warning? By attentively watching the pulse, say the majority. Not so, say Lister and Sédillot, the pulse ought rather to be disregarded, in order that undivided attention may be given to the state of the respiration.

It certainly seems strange to us that our European contemporaries should still be willing to accept the well-known dangers of chloroform, or else deprive their patients of the benefits of anæsthesia, rather than take the trouble to give ether a *trial.* One reason of this inertness is doubtless the fact that the majority of surgeons go through a life-time of busy practice without meeting with one disastrous case; they remain extremists, satisfied with chloroform and with themselves, and seeing no reason to change their practice. The unfortunate pessimist, on the other hand, goes on with chloroform through *vis inertiæ;* he either seeks every pretext to withhold anæsthesia, or else he uses it in a timid, ineffectual manner, operating anxiously on half-conscious patients, and even then fearful of exposing himself by incomplete administration to the very danger he seeks to avoid; that this is no exaggeration, anyone who is familiar with the practice in foreign hospitals can testify. "Why not try ether?" we would say to these sadder, but not wiser men; but they shake their heads at the proposal; to them all anæsthesia has lost its charms; ether, they say, causes fewer deaths only because less frequently given (Guyon), or because less potent (Lister), or else, to support their distrust, they point to cases of death during etherization like that of Dr Lake, lately so thoroughly disposed of by Prof. Bigelow.

From this short survey of the mental state of the profession in Europe with regard to anæsthetics, we have cause to fear that it may be useless to look to our professional brethren for any initiative of change for the better; no movement in favor of ether can be expected to take place until the necessity thereof is felt and enforced upon the profession by the public at large. With this end in view, it may be hoped that such cases as that of Mrs. Crie, with all the attendant publicity, may not have occurred in vain.

T. B. CURTIS, M.D.

NEW ORLEANS, LA., November 16, 1873.

MESSRS. EDITORS,—In my letter of the 14th, I recorded some experiments upon the action of black vomit of yellow fever upon living animals, which led to the conclusion that the absorption of black vomit, after it had undergone putrefactive changes in the stomach of the yellow fever patient, might be the cause of death in this disease; and I was led by these results to employ the sulpho-carbolate of lime.

The following case, which was the first in which I used this remedy, presents many points of interest.

D. P., native of Italy; aged 18; has resided in New Orleans six years; residence, St. Anne St., near Levee; had a slight chill, followed by fever, October 14th, 1873; entered Charity Hospital October 16th, 4½, P.M., with hot skin and rapid pulse. Breath offensive; face red; great capillary congestion generally. Conjunctiva of eyes congested and yellow. Body emits an offensive smell. Tongue red at edges and tip, and coated with yellow fur in centre; gums red. Patient complains of some pain in head, lumbar region and extremities.

8 o'clock, P.M.—Pulse 106; respiration 28; temperature of axilla 104°. ℞. Potassii bromidi, ʒij.; Liquoris ammoniæ acetatis, f℥iv. Tablespoonful every four hours.

October 17th, 8, A.M.—Patient restless. Complains of intense pain in the head and extremities, back and epigastrium; also of nausea. Has passed no urine since entering the hospital; when the catheter was introduced, only one fluid ounce was drawn off, which was found to be loaded with albumen and bile. For the relief of the nausea, an ice-bag was ordered to be placed upon the epigastrium; for the relief of the suppression of urine, ice-cold water was thrown up the rectum in large quantities. The injections of ice-water had the desired effect, and caused the excretion and evacuation of a considerable amount of urine, which was heavily loaded with albumen.

In order to prevent septic changes in the black vomit, if it should be formed, I ordered the following:—

℞. Sodii sulpho-carbolatis, ʒi.

Divide into three powders. One powder, dissolved in a wineglassful of water, every three hours.

Small quantities of brandy, largely diluted with water, water charged with carbonic acid gas, and iced milk at regular intervals. Fragments of ice to be held in the mouth.

8½, A.M.—Pulse 100; respiration 28; temperature of axilla, 106·5°.

8 o'clock, P.M.—Condition unchanged. Jaundice, capillary congestion, nausea and restlessness increasing; urinary excretion scanty; pulse 98; respiration 26; temperature of axilla 104·1°. Urine contains albumen and casts. *Treatment.*—Continue ice-bag to epigastrium; ice-water enema; and sodium sulpho-carbolate, twenty grains every three hours.

October 18th, at 4 o'clock, A.M., the patient commenced to throw up black vomit, and continued to do so at short intervals, quite freely, until 8½, A.M. The sulpho-carbolate of sodium appears to have exerted some beneficial influence, as the black vomit is of a brighter color than usual, and contains coagula of blood.

8 o'clock, A.M.—Pulse 82; respiration 28; temperature of axilla 102·1°; gums red; tip and edges of tongue very red; centre and body of tongue coated with yellow and brownish-yellow fur; blood oozes from tongue and gums. A small quantity of urine, about half fluidounce, has been drawn off by the catheter, which was found to be highly albuminous. Patient delirious and very restless. A stout, strong man was directed to sit by his bed, and to keep him quiet and prevent him from getting out of bed.

℞. Sodii sulpho-carbolatis, ʒij.; divide into six powders; one powder every three hours. Inject ice-cold water, at intervals of four hours, into the rectum, until the kidneys act freely; apply ice-bag to epigastrium; apply sinapism to back of neck and lumbar region. Administer, at regular intervals, alternately, small quantities of brandy largely diluted with water charged with carbonic acid, and iced milk.

The brandy and carbonic-acid water appeared to increase the nausea and vomiting, and were accordingly discontinued; the sodium sulpho-carbolate, on the other hand, appeared to quiet the stomach, and, during the course of the day, the black vomit ceased, and the patient enjoyed several hours of refreshing sleep. These results appeared also to be due to the local application of ice to the epigastrium, and the injections of iced water not only controlled the nausea and excited the kidneys to action, but also reduced the high temperature.

6 o'clock, P.M.—Pulse 80; respiration 24; temperature of axilla 102°; patient in much the same condition, but not so restless; the injections of ice-cold water were followed by a pretty free excretion of high-colored and albuminous urine. Black vomit has ceased, but nausea still continues.

October 19th.—Condition of patient still alarming; great congestion of capillaries; the face presents a deep mottled purplish appearance; hæmorrhage from tongue and gums. No return of black vomit. Kidneys excreting urine more freely. Pulse 94; respiration 24; temperature of axilla 100°.

Continue sodium sulpho-carbonate, 20 grains every 3 hours.

7 o'clock, P.M.—Patient improving; intellect clear; capillary congestion less; jaundice not so marked; pulse 76; respiration 20; temperature of axilla 100·5°. Continue sulpho-carbolate of sodium. Up to the present time, the nourishment of the patient has been confined chiefly to iced milk.

Oct. 20th, 8 o'clock, A.M.—Pulse 68; respiration 18; temperature of axilla 99·5°. Patient decidedly better; no nausea; urine excreted in sufficient amount; capillary congestion and jaundice disappearing.

Continue sulpho-carbolate of sodium, 20 grains every 4 hours; iced milk in small quantity, and brandy diluted with carbonic acid water, at regular intervals.

October 23d, 8 A.M.—Cheerful; sitting up in bed; bright expression of eyes and countenance; complexion clear; complains of nothing but hunger; Pulse 62; respiration 20; temperature of axilla 98.9°.

The restoration to complete health in this case was rapid and continuous.

The relations of the pulse, respiration and temperature, will be illustrated by the following table :—

DATE.	PULSE.		RESPIRATION.		TEMPERATURE OF AXILLA.		REMARKS.
	Morn. 8, A.M.	Eve. 8, P.M.	Morn. 8, A.M.	Eve. 8, P.M.	Morn. 8, A.M.	Eve. 8, P.M.	
1883							
Oct. 16		106		28		104°	Great capillary congestion. Nausea.
17	100	98	28	26	106·5°	104·1°	Suppression of urine. Jaundice.
18	82	80	28	24	102·1°	102°	Black vomit. Delirium. Urine Suppressed.
19	94	76	24	20	100°	100·5°	Cessation of black vomit.
20	68	70	18	18	99 5°	100·1°	Kidneys acting. Symptoms not so grave.
21	66	64	20	22	100°	100°	Decided improvement.
22	62	60	20	19	99°	99·8°	Patient improving.
23	62	63	20	24	98·9°	99 9°	

Careful records of the cases of yellow fever, treated in my wards in the Charity Hospital, were prepared, but it would extend this letter to too great length to report them in detail, and that given will serve the double purpose to illustrate the nature of the epidemic of 1873, and at the same time to exhibit the main features of my method of treatment..

I regard the ice-water injections and the careful regulation of the diet, and the preservation strictly of the recumbent position, as fully of as great importance as the administration of the sulpho-carbolate of sodium.

The sulpho-carbolate of sodium does not irritate the stomach and bowels in yellow fever, and does not damage the nervous system.

Much will be gained in the treatment of yellow fever, if it were possible to convince the medical profession of the importance of abandoning all useless and heroic medication.

Whilst 200 deaths have been officially reported in 368 cases of yellow fever, in my hospital practice, if those patients be excluded which were brought into my wards *in articulo mortis*, the mortality has amounted to not more than 5 per cent., or one death in 20 cases. Respectfully,

JOSEPH JONES, M.D.

Medical Miscellany.

THE inquest in the case of Mrs. Homan, who died at Lynn under anæsthesia, is not concluded as we write, so we reserve the whole case for our next number.

LIQUID NOURISHMENT FOR SICK STOMACH.—The *Dublin Medical Journal* commends the following: An egg well beaten up, to which add one pint of good milk, one pint of cold water, and salt to make it palatable; let it then be boiled, and when cold any quantity of it may be taken. If it turns into curds and whey it is useless.

CHLOROFORM IN DENTISTRY.—At the late meeting of the Society, the following resolution was almost unanimously adopted:—

"*Resolved*, That, in the opinion of the Massachusetts Dental Society, the use of chloroform in dental operations is inadvisable."

NUMBER OF PHYSICIANS TO POPULATION.—Prussia has one physician for every 3,200 inhabitants, Austria one in every 4,355, Hungary one in 5,492, while Russia has but one for 14,166 people. In the United States, according to the census of 1870, there is one "doctor" to about 600 of population! Enough, one would think, to justify their being placed under some uniform national regulation.—*Med. and Surg. Reporter.*

DEVELOPMENT OF BACTERIA.—Dr. Oslez (of Canada) claims to have witnessed, under the microscope, the actual development of bacteria from small masses of agglutinated corpuscles. To observe this phenomenon, the blood is mixed with a weak solution (three-fourths per cent.) of common salt, and maintained at the temperature of the body.

PROFESSOR HYRTL, of Vienna, in a recent lecture, announced his intention to close his career as a teacher at the end of the present semester.

The lecturer stated that during an anatomical career of now forty years, the days were sacred to him when, at the beginning of each season, he used to enter the lecture-room, meeting an assembly of young men full of desire for knowledge, to receive the master's first greetings and welcome, and to be introduced into the beautiful dominion of science, which has been to him a true partner through life.—*Med. Times and Gazette.*

EXCESSIVE MORTALITY FROM MEASLES.—During the week ending Saturday, November 22, 130 deaths from measles were registered in London, the highest mortality from this disease which has ever been returned since the beginning of 1840, when the weekly returns of deaths were first published; 121 of these 130 deaths occurred in children under five years of age, whilst the death of only one adult was due to the disease.—*Brit. Med. Jour.*

IMPURE WATER.—Mr. J. M. Merrick has recently examined a specimen of water taken from a well in this city, which had not been used for fifteen years, and found in every gallon inorganic matter to the amount of 1290 grains, and 299 grains of organic and volatile matter. The well is in a low situation, with a perfect network of drains and sewers around and above it, and the soil has evidently become saturated since the well was last used.—*American Chemist.*

STYPTIC COLLODION.—The following will be found a most useful formula:—

Tannin	2 ozs.;
Alcohol	4 ozs., fl.;
Ether	12 ozs., fl.;
Soluble cotton	1 drachm and 2 scruples;
Canada balsam	1 drachm.

Dissolve the tannin in one part of the alcohol, and ether with the Canada balsam; then add the cotton.—*Dublin Medical Press and Circular.*

EXTRAORDINARY PRECOCITY.—Dr. A. R. Kilpatrick, of Navasota, reports *(Med. and Surg. Reporter)* that a negro girl in that county has given birth to a fully developed female child, at the early age of about *eleven and one-half years.*

A CENTENARIAN.—Robert Sexbury died on Oct. 23d, in the town of Leary, Jefferson county, New York, aged one hundred and ten years and seven months. He had acquired great reputation as a hunter on John Bowen's tract, in northern New York, where he had killed over 2200 deer. When past eighty years of age, he met with an accident which necessitated the amputation of one of his legs, and he assisted a country doctor to perform the operation without flinching. His funeral was attended by several of his children, aged between eighty and ninety years.—*Med. and Surg. Reporter.*

SUDDEN DEATH OF A SPIRIT MEDIUM.—On Sunday evening, a person named Benjamin Hawkes, having a great local reputation as a medium, was addressing a meeting of spiritualists and others at the Athenæum Rooms, Birmingham. After holding forth for about half an hour, during which time he became visibly excited, he proceeded to describe how, during the *séance*, the Apostle Peter had appeared to him, he (the medium) having felt the grasp of his hand. From this he argued that it was quite possible to understand how St. Thomas was enabled to thrust his hand into our Saviour's side. We are told by telegraph that the instant these last words were out of his mouth he fell back a corpse. His hearers imagined for a moment that he was under spirit control, but a surgeon being present, pronounced life to be extinct, and the meeting broke up in wild confusion. Of course, the awfulness of the death is the theme of general remark, and as the man was in excellent health, the popular idea of its cause will be readily inferred by our readers. A coroner's inquest is to be held upon the body.—*Medical Press and Circular.*

NOTES AND QUERIES.

CAN anyone give information to the physicians of Boston as to what source they shall look for the payment of their fees when they are called to police stations to dress wounds or attend the sick there, or when called on by the police to attend cases either at their office or at some neighboring drug store? One authority says only the City Physician will be paid by the city. Can some one tell us the right of it?

And another question. When physicians are summoned to court to testify in regard to dressing wounds and the like, how much of a witness fee are they entitled to? Have physicians got to spend a large number of hours in court and receive only a simple witness fee? Answers will be earnestly expected. X. Y.

MORTALITY IN MASSACHUSETTS.—*Deaths in fifteen Cities and Towns for the week ending December* 6, 1873.

Boston, 138—Charlestown, 18—Worcester, 16—Lowell, 12—Chelsea, 8—Salem, 6—Lawrence, 10—Springfield, 9—Lynn, 11—Fitchburg, 2—Newburyport, 2—Somerville, 10—Fall River, 25—Holyoke, 2—Pittsfield, 7. Total, 276.

Prevalent Diseases.—Consumption, 46—scarlet fever, 29—pneumonia, 29—typhoid fever, 15.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, Dec. 13th, 152. Males, 78; females, 74. Accident, 5—apoplexy, 4—aneurism, 2—disease of the bladder, 1—disease of the bowels, 1—bronchitis, 5—congestion of the brain, 1—disease of the brain, 5—cancer, 3—consumption, 27—convulsions, 5—debility, 6—dropsy, 2—dropsy of the brain, 4—destitution, 1—diphtheria, 1—erysipelas, 2—scarlet fever, 12—typhoid fever, 5—remittent fever, 1—disease of the heart, 4—homicide, 1—insanity, 1—disease of the knee-joint, 1—disease of the kidneys, 3—disease of the liver, 4—congestion of the lungs, 2—inflammation of the lungs, 13—marasmus, 5—old age, 2—paralysis, 2—premature birth, 6—peritonitis, 1—puerperal diseases, 2—rheumatism, 1—scalded, 1—disease of the spine, 1—suicide, 2—tumor, 2—whooping cough, 1—unknown, 4.

Under 5 years of age, 50—between 5 and 20 years, 11—between 20 and 40 years, 42—between 40 and 60 years, 24—over 60 years, 25. Born in the United States, 93—Ireland, 42—other places, 12.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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Original Communications.

CASES ILLUSTRATING THE USE OF THE PNEUMATIC ASPIRATOR IN SURGERY.

By Charles D. Homans, M.D., Boston.

The advantage of the use of the aspirator, in enabling surgeons to make a diagnosis in cases where the existence of fluid is doubtful, seems to be pretty generally recognized, but practitioners do not appear to realize that this instrument is of great value in surgery in the treatment of many other affections. It has been used for the removal of pus and synovia from joints, for the emptying of chronic abscesses, in cases of chronic hydrocephalus, of retention of urine, of strangulated hernia, and to relieve the pain of distention in cases of great flatulence. In all these cases, some, of necessity, mortal, the relief to pain is very great, while, as a rule, the punctures made by the aspirator needles have been followed by no serious consequences; in fact, in most cases at post-mortem examinations, but little if any trace of their passage could be found.

This instrument was used many times during the past season in my service at the City Hospital, and the following are some of the most striking of the cases:—

Case I.—*Strangulated Hernia.* April 20th. P. B., laborer, aged 54 years, has had oblique inguinal hernia on the right side for the past ten years; he has always worn a truss till within a week before entrance; three days ago, after exertion, the hernia came down, and has remained down since, notwithstanding efforts at reduction were made by himself and two physicians. Constitutional disturbance not great. The hernial mass was about the size of a hen's egg, and very tender. The patient was etherized, and taxis tried for half an hour without success; a fine aspirator needle was then thrust into the tumor, and from three to four drachms of fluid, containing bubbles of air, drawn out. Taxis was then again resorted to, and the hernia immediately returned. No unfavorable symptoms supervened, and the patient was discharged, well, the eighth day after the operation.

Case II.—*Strangulated Hernia.* May 26th. B. R., seaman, aged 27 years, entered the hospital with a large inguinal hernia on the right side, which had been down for several hours, and which he had vainly tried to reduce himself. He had been ruptured more than seven years, and had usually worn a truss of his own manufacture. Four years ago, he was operated on by a distinguished surgeon of London, by Wood's method, for the radical cure of the hernia, but the operation, at first apparently successful, was followed by a recurrence of the rupture after seven or eight months. Since then, it has frequently come down, but he has always been able to return it without the aid of a physician. Now there is a large hernial tumor in the right groin, very painful and tender. It is quite firm to the touch, and the skin over it shows the scars of the operation in London. There was some acceleration of the pulse, and the countenance was anxious. The patient was etherized, and attempts were made to reduce the hernia by the taxis, by position, and in every way that could be suggested, but without success. The tumor was punctured with the fine needle of the aspirator three successive times, but no fluid or gas passed out. The ordinary operation for strangulated hernia was then resorted to, and the tumor found to consist wholly of intestine, very tightly compressed, which may, perhaps, explain why no fluid or air came after the punctures. The patient did perfectly well, and was discharged three weeks after the operation.

Case III.—*Retention of Urine from Stricture.* A man, aged 37 years, entered the hospital with his bladder distended with urine, none having been passed for thirty hours. Many attempts had been made to pass an instrument through the urethra, but without success. There was a stricture four inches from the meatus, and blood followed the attempt to pass the catheter. The fine needle of the pneumatic aspirator was passed into the bladder behind the pubes and three pints of urine were drawn off. The bladder was punctured again the next day, after which the urine came naturally.

Case IV.—A man, aged 28 years, was brought to the hospital, having fallen astride a plank ten hours before, and having been unable to empty his bladder since. He was suffering greatly from distention, and the aspirator was immediately used, as in Case III., forty ounces of urine, slightly tinged with blood, being drawn off. It was afterwards necessary to perform perineal section, and the man eventually recovered.

Dr. Wm. Ingalls also used the aspirator in a case of retention of urine from stricture with similar good results, and it was used many times for emptying abscesses, exploring tumors, &c. Its use in one of the cases of strangulated hernia was, apparently, of the greatest service, while in the other case no harm was done, though three punctures were made. In the cases of retention of urine, the advantage of this manner of relieving suffering is certainly very striking over the old way of tapping through the rectum. The needle is more easily introduced if a very slight puncture is first made through the skin.

LOCAL ANÆSTHESIA OF THE LARYNX.

By F. A. Harris, M.D. Harv.

Though one sometimes meets with patients who, at the first examination, bear not only the introduction of the laryngeal mirror perfectly well, but, also, the introduction of the sound, or the porte caustique, still, in the great majority of cases, this latter point is only reached after a tedious course of drillings, lasting from a few days to several weeks; and even more time may be consumed without the sensibility of the larynx being sufficiently diminished to allow of an operation.

The time and patience of both practitioner and patient are thus severely taxed, and, general anæsthesia being out of the question, since a certain amount of assistance must be rendered by the patient, a safe and reliable means of producing a local insensibility of the larynx is very much to be desired.

Prof. Türck, of Vienna, claims to have been the first to attempt to overcome the obstacles which lie in the way of a speedy operation.

He made use of a solution consisting of—

℞. Morphiæ acetatis, gr. iij.;
Alcohol, ʒj.;
Chloroformi, ℥ss. M.

This he applied with the ordinary laryngeal brush, or by means of his so-called "sponge syringe," which was simply a sponge fastened to the nozzle of a small syringe, the nozzle being of suitable length and curvature to be introduced into the larynx. With this solution he was tolerably successful, failing of anæsthesia only twice.

Then he tried a solution of acetate of morphia in distilled water. The strength varied from 3 to 12 grains to the drachm, and to the more concentrated solutions a little acetic acid was added. The application was made with the laryngeal pencil, but the weaker solutions produced no anæsthesia, and the stronger only an insufficient degree.

Then a solution of twenty grains to the drachm was tried in three cases, and one of forty grains in one case, and only a slight degree of anæsthesia was produced in any case after a single application; but the application, repeated four times, produced intense anæsthesia of the larynx.

In three other cases, three applications of a solution of one part to three produced complete insensibility.

In all these cases, the interval between the individual pencillings was from five to fifteen minutes. In cases where the interval was longer, the anæsthesia was slight.

Two applications of the latter solution, in four other cases, produced full local insensibility, while in a fifth case it was insufficient.

The degree of anæsthesia in the cases mentioned varied. Only seldom was it impossible to introduce the sound, and in many cases, touching in any part of the larynx produced neither coughing nor contraction of the larynx; in short, no reflex action whatever. Türck noticed that the degree of insensibility increased gradually from the first, so that while, at first, it was hardly possible to begin an operation, at last, the loss of sensitiveness allowed operations of considerable length to be performed. The most intense anæsthesia was attained two or two and a half hours from the last pencilling, and the duration was from a few hours to a day and a half, and once even as long as seventy-two hours.

The effects produced in the larynx by the use of the morphine and water solution were cough, slight pain (probably caused by the acetic acid) partial hyperæmia and swelling and slight ecchymoses on the vocal cords and inferior section of the larynx.

He states the number of pencillings to have varied from two to six, though in some of his reported cases he goes as high as thirteen. The quantity of fluid used at a single pencilling was about ten minims, so that four pencillings would require ten grains of morphia; so, allowing for a little waste in introduction, there would be two grains introduced at each pencilling.

Later, although he had pretty much attained his object, as far as producing an insensibility of the larynx, he made farther experiments, to see if he could avoid the general narcotism which followed his operations and to avoid so much local irritation of the parts.

He pencilled twice with clear chloroform, and then followed, a few minutes later, with a weak solution of morphine, 1:20. In the first two cases, where the interval between the chloroform and morphia was only eight minutes, the anæsthesia was slight. In one, where the interval was two hours, one pencilling with morphine produced no local effect, while in the last case an interval of two hours, followed by two pencillings within five minutes, gave an intense anæsthesia. The action of the chloroform seems to be, since it alone will not produce anæsthesia, to destroy the epithelium and to promote the absorption of the morphine, as if given endermically.

Now, considering the large amount of morphine used, the results in regard to general narcotism are interesting.

In all the cases but two, there were general symptoms, and they generally made their appearance early, the local effects being manifested later.

There was always dizziness, staggering, feeling of intoxication, some headache and muscular weakness, and, later, in many cases, nausea and vomiting. Severer symptoms followed the use of the 1:3 solution four times. The dizziness and staggering compelled the patients to lie down; tremblings, formication in the extremities, drowsiness, contracted pupils, with more or less diminished sensibility of the iris. In one case, blackness of vision, roaring in the ears. In three cases, also, retention of urine, pulse reduced in strength and frequency, sometimes profuse perspiration.

Consciousness, however, was not impaired, nor was there sopor in any case.

The general symptoms appeared from fifteen minutes to two hours after the last pencilling, the severer symptoms, however, not coming on till later.

The general narcotism lasted from six hours to two days.

The relative duration of the narcotism and the local insensibility showed that the former made its appearance first, and the local effect lasted generally from seven to forty-eight hours after the severer general symptoms.

Dr. Schrötter has made use of the latter method, slightly modified, quite extensively, and in the *Jahresbericht* for 1870 reported several cases of interest:

Case I.—Mrs. G., æt. 27; tumor below the vocal cords, which Dr. S. had been unable to remove by pencilling with the iodine-glycerine solution, and, since the patient was too sensitive to allow an operation, he determined on local anæsthesia, produced in the following manner:—

May 5th, at 7 o'clock, P.M., pencilled twelve times with clear chloroform; at 8, P.M., twelve pencillings of a solution of six grains acetate of morphia to the drachm of water, the patient being cautioned not to swallow, and to gargle thoroughly with

℞. Acidi tannici,
Spts. Vini rectif., āā ʒj.;
Aquæ, ℥vi. M.

On the following morning, still being sensitive, the pencillings were repeated in the same way, at 7.30 and 9.30, and at 11.30 the local anæsthesia was complete, and the tumor was scarified and cauterized.

On May 31st, the second operation was undertaken. On the previous evening, at 6.30, chloroform pencilling; at 7.30, pencilling with morphine, and the next morning, at 7.30 and 10.30, the same repeated. At noon, there was not time enough for the operation, so at 3.30 patient was again pencilled, and at 5.30 the anæsthesia was complete.

Case II.—*Epithelioma.* Pencilling on the previous evening; in the morning, local anæsthesia, with pretty marked general narcosis.

Case III.—*Epithelioma.* One pencilling previous evening; two in the morning, complete anæsthesia.

Case IV.—*Fibrous Tumor.* Pencilling in the same way. Complete anæsthesia.

Case V.—*Sarcoma of Trachea.* Dec. 21st, evening, pencilling with chloroform and morphia. At 8, A.M., and 10, A.M., repeated, so that in all about 18 grains of morphia was used. Narcosis of larynx complete; but, owing to the pencilling with chloroform, an extensive œdema prevented the success of the operation. Dec. 29th, three pencillings with chloroform and six with morphine, at 7 and 8, P.M., respectively. 30th, at 7.30, six morphine pencillings. Complete anæsthesia. This patient was operated on several times, and, at all the subsequent operations, the anæsthesia (which was not very intense) was produced by pencilling with morphine alone six times.

The results of these cases show that a complete anæsthesia of the larynx can be produced, and, despite the large amount of morphia used, without danger to the patient.

The most successful method is that of pencilling with chloroform one hour previous to the pencilling with morphine, which latter should be done two hours before the operation is attempted.

The amount of morphia used by both Türck and Schrötter is about the same, namely, nine to ten grains, either in concentrated solution applied a few times, or a more dilute one, more frequently used.

Dr. Schrötter said, however, in his lectures last winter, that, while he had never had any dangerous consequences from this application, it behooved every man to use the greatest care, and to have the patients constantly under the eye till all risk of fatal narcosis was past.

Spasmodic Contractions of the Neck of the Bladder relieved by Cystotomy.—Dr. Parona, of Novara, reports at length two cases in which cystotomy was successfully practised for the relief of spasm of the bladder. The first case was that of a man whose genito-urinary apparatus had been the source of uninterrupted suffering for a period of eight years, the symptoms being acute pain in the vicinity of the gland and a frequent desire to urinate, all efforts at expulsion being, however, futile. The administration of quinine with narcotics, bromide of potash, atropine, the application of counter-irritants and electricity, and the injection of phenic acid were attended by no favorable result. The neck of the bladder was, therefore, divided by the aid of Mercier's prostatic incisor, and in the course of twenty-five days a complete cure was effected.

In the second case, the symptoms were similar to those of the first, being the sequence of a neglected gonorrhœa. The pain was so severe as to give the patient no rest night or day. As in the first case, there was no evidence of hæmorrhoids, calculus, or prostatic tumor. The treatment consisted in the injection into the bladder of phenic acid, tannin and laudanum, and nitrate of silver, all of which afforded but temporary relief, and a like result attended the exhibition of bromide of potash, inunctions of belladonna, as well as the hypodermic injections of morphine and atropine. Forced dilatation of the neck of the bladder was next resorted to, but this only aggravated the trouble. After three months had been wasted in this inefficient treatment, it was determined to divide the muscles which seemed to be the seat of the contractions. The perineal section was, therefore, performed (median operation), and the result was still more favorable than in the former case, for at the end of twelve days no trace of the former symptoms remained.

Parona concludes by observing that equally satisfactory results have attended this operation when it has been performed with the view of extracting a calculus, but where no calculus could be found, after the bladder had been entered.—*Le Mouvement Médical; Rivista clinica di Bologna*, 1873.

Progress in Medicine.

REPORT ON SURGERY.

By J. Collins Warren, M.D.

(Concluded from page 615.)

On the Operative Surgery of the Foot and Ankle-joint. By Henry Hancock. London. 1873.

This is a series of lectures delivered by the author before the Royal College of Surgeons during the years 1865–66, with additions bringing them down to the present time. Lecture I. is devoted to the anatomy of the foot. In Lecture II., we find an interesting account of that disease of which we hear so little in this country, namely, perforating ulcer of the foot, or the *mal perforans* of French writers. As described by the latter, it consists of an ulcer situated usually on or near the ball of the great toe, with thickened edges which possess extreme insensibility. It commences in a corn, which is followed by the formation of an ulcer, assuming gradually the characteristics above described. The disease penetrates to the bone or joint, which eventually is found also to be affected. The cases described by the author present some differences from the above picture. The patients were generally affected in several parts of the foot at the same time, although the bones attacked were chiefly the phalanges and the heads of the metatarsal bones. There was considerable swelling and thickening of the soft parts, in which existed several sinuses. The characteristic ulcer is not always described as being present, however, and the insensibility of its edges is not alluded to. There was, in all cases, an offensive sweating of the foot. Frequently, both feet were attacked. Other parts of the body, as the hands, are described as being affected by the disease. It is considered to be of constitutional origin, and in many cases several of a family were the victims of the disease. It is also thought to be hereditary. The author lays stress upon the fact that the disease invariably commences in the region of the anterior extremities of the metatarsal bones and their joints with the toes, and that its tendency is to confine itself to that region, while there is complete immunity of the region of the heel. If, therefore, after removing the diseased bone and soft parts, the disease returns, it is advised to remove the whole of the metatarsal bones, by either Chopart's, Syme's or Pirogoff's amputation. An account is appended of a disease known in India as tubercular disease of the foot, and supposed to be identical with the perforating ulcer. There is, however, much greater alteration in the soft parts and more extensive disease of the bones. (The *Centralblatt* for Nov. 1 gives a case of M. Verneuil's, where the ulcer was situated on the left calf; amputation was performed, and the disease returned in the stump, with severe neuralgic pains. The resection of the peroneal and tibialis anticus nerves was then tried, but with what success was not stated.)

In regard to amputations of the foot, Mr. Hancock's conservative tendencies are shown in the following suggestions as to operations upon the foot.

"*(a.)* That we should perform our operations as close to the diseased or damaged structure, and preserve as much of the foot as possible with safety to our patient.

"*(b.)* That, when practicable, we should cut through the tarsal bones with a saw in preference to disarticulating them.

"*(c.)* That we should avoid the destruction of joints whenever we can do so.

"*(d.)* That disease of one articulating surface does not of necessity demand the removal of the entire bone; as, for instance, when confined to the tarso-metatarsal joints, or to the joints between the cuneiform and scaphoid, it is not always necessary to remove the whole of the cuneiform bones on the one hand, or of the entire scaphoid bone on the other. In such cases, however, the diseased portion should be removed by a clean cut made with a saw, and not be bruised off by a gouge or chisel.

"*(e.)* That, whilst the openings in the skin cannot be relied upon as indicating the exact situation of the bone mischief, the existence of these openings, even if there be several, or the thickening and discoloration of the skin and soft parts, do not of themselves contra-indicate operative procedure, since, as is pointed out by Sir W. Fergusson, the soft parts, when relieved of the source of irritation, will speedily return to their natural condition."

He strongly condemns the practice of sacrificing any bone or joint of the foot for no other reason than that a particular operation, as, for instance, Chopart's, should be performed.

The author reviews, at length, Syme's amputation at the ankle-joint, and defends it against the numerous objections which have been raised. The results of this operation, he says, are most favorable in England. Pirogoff's operation is also favorably noticed. In comparing the two operations, he remarks:—"As regards the occurrence of suppuration, the percentage of deaths, of secondary amputations, of recoveries and periods of recovery, the evidence of British surgery is in favor of Syme's operation; whilst as respects sloughing of the flap, it is decidedly in favor of Pirogoff's proceeding. Syme's operation appears to me to be unquestionably the best for disease, and Pirogoff's for accidents of civil life, since by it we preserve an increased length of limb."

Ligneroll's, or the subastragaloid amputation, possesses an advantage over both the above in preserving the ankle-joint intact, while the natural heel structure is equally obtained. There is a disadvantage, however, resulting from the tendo Achillis forming fresh attachments, and pulling up the astragalus behind, by which the head of the bone is forced downwards, so that the patient, in walking, may rest on this prominence instead of the broad under surface of the bone. This may be prevented by removing the head of the astragalus at the time of the operation. This operation can, in certain cases, be substituted with advantage for Syme's or Pirogoff's. In case disease of the tarsus does not extend to the astragalus, while only the anterior portion of the os calcis is affected, Mr. Hancock has devised a modification of the subastragaloid, which consists in leaving the posterior third of the os calcis and turning it up under the astragalus. This he has tried in one case, and with successful result.

Mr. Hancock claims to have been the first to introduce excision of the ankle-joint into the arena of British surgery. This operation he considers a valuable one, and infinitely preferable to amputation for disease of the ankle-joint, and expresses regret that it is not more frequently performed. He makes a semi-lunar incision, extending across the front of the joint to behind the malleoli on either side. This enables the surgeon to saw through the bones without injury to tendons or arteries, and to see clearly what he is doing. He does not speak of the advantages of saving the periosteum of the tibia and fibula, as done in Langenbeck's cases, where considerable portions of these bones were reproduced. The cut surfaces of the tibia, fibula and astragalus are placed in apposition, while in Langenbeck's method a space is left for the reproduction of bone, the normal length of the limb being thereby maintained. The author objects to Chopart's amputation, on account of the sacrifice of the scaphoid bone, the support of the head of the astragalus being thus destroyed. He therefore recommends that this bone be allowed to remain, and that the cuboid be sawed through on a level with the most prominent portion of the scaphoid. It is of advantage to save even a portion of the scaphoid. The resulting stump is excellent, the patient being able to walk, not only on level ground, but up ladders without difficulty.

Excision of a portion or the whole of the os calcis is recommended for disease of that bone, and cases are given to show that this is not an operation attended with as grave results as has been supposed, and that the resulting foot is a useful one.

On the Mechanical Treatment of Diseases of the Hip-joint. By C. F. Taylor, M.D. New York: Wm. Wood & Co. 1873.

Dr. Taylor, in this work, describes a new hip-splint, which appears to possess several advantages over those now in common use.

The article is handsomely and clearly illustrated by numerous drawings, which represent satisfactorily the few important points in the treatment of this disease, which he desires to impress upon his readers. The text is little more than a description of the illustrations, together with a brief exposition of the theory on which the treatment is based. The first chapter contains a reference to a large number of cases observed in the "New York Orthopædic Dispensary and Hospital." Statistics drawn from these cases bring him to the conclusion that, so far as regards the mechanical treatment, disease of the hip-joint may be regarded as essentially traumatic. This broad statement, he says, is strongly confirmed by the fact that the disease, when occurring in a clearly strumous constitution, runs a characteristically more variable and less benign course. Owing to its peculiar character, and the support which it receives on all sides by powerful muscles, the hip-joint is little liable to those slight and passing injuries which we meet with in other joints. But when direct force is applied to it by a vertical blow, or by a lateral force by which the head of the bone is driven directly in upon the socket, without the modifying influence of muscular action, a strong impact is made, which is liable to produce injury. The chief cause which prevents a diseased movement from terminating by resolution is the pressure exerted upon the joint by the muscular rigidity made necessary to diminish the immediate pain and injury of motion. Moreover, every movement and the weight sustained are transmitted directly to the joint, because of the rigid and inelastic condition of the muscles. If we add motion to a diseased and compressed joint, we cannot wonder, he says, at the destructive course disease of the hip-joint ordinarily runs.

There exist, then, two prime indications for mechanical treatment:

1st. To relieve pressure in the joint, due to muscular contraction, by temporarily destroying the muscular irritability and contractility.

2d. To protect the joint from weight and concussion.

The indication for arresting motion in the joint, which is well met by stiff bandages, pertains only to a condition of rigid muscular contraction, but no such necessity exists after all muscular rigidity has been overcome. The use of extension by weight and pulley is not approved of by Dr. Taylor, on account of the necessary confinement and the hygienic disadvantages connected with this form of treatment. It is, moreover, capable of overcoming the action of but one set of muscles, the flexors. There exist no means of regulating the direction of the force, or to antagonize any set of muscles which may be more especially implicated in the injurious contractions. Sayre's splint, also, is not only open to this objection, but, being applied above the knee, permits motion of the knee-joint, a disadvantage, in the opinion of the author, as it necessarily diminishes motion at the hip-joint, which is useful after complete relaxation of the muscles has been obtained. The adduction of the thigh, nearly always present, brings a strain upon the knee, resulting, often, in relaxation of the internal lateral ligaments and genu valgum.

It is important, indeed absolutely necessary, to overcome *all* muscular action and to remove *all* pressure upon the joint. One must not be content to stretch the muscles, simply; they must be stretched till they yield.

The instrument which, in the author's opinion, answers these indications consists of a hollow rod of steel, reaching from the ankle to the hip, with a foot-piece working in the lower end, and capable of being lengthened or shortened.

The upper end is attached to a pelvic band, made of steel, strong enough to support the weight of the body without yielding. To this band are attached two perineal straps. A hinge joint permits flexion and extension of the thigh on the pelvis, the knee, however, being kept immovable. A screw is so arranged as to force the shaft of the instrument and the opposite side of the pelvis farther apart, in case it is necessary to abduct the leg. Before applying the apparatus, the limb is encased in adhesive strips, which reach to the ankle on either side. The ends are made strong by putting several thicknesses together and attaching a buckle. A bandage being applied over this, the instrument is adjusted while the leg is retained in its abnormal position, the patient lying down. The buckles are then attached to straps going under the foot-piece and extension is made. There should always be an interval of about an inch between the sole of the foot and the bottom of the instrument. If there is much flexion, the limb should be kept in an inclined plane, and the distortion treated by gradually letting down the inclined plane, care being taken not to bring force to bear upon the spine. If much adduction, extension of the shaft will pull upon the opposite perineal strap and tilt the pelvis. This can be also corrected by the screw alluded to above. A few days suffice to stretch the contracted muscles, and the patient can then walk about. When in the upright position, the patient practically sits upon his perineal straps. There being an interval between the foot and the ground, no pressure, whatever, is brought to bear upon the hip. After all pain and tenderness have ceased, and there is no longer a disposition of the muscles to contract, and there is free motion of the joint, the instrument should be abandoned and an ingenious contrivance substituted, which can be worn underneath the clothes, for the purpose of protecting the joint until the cure is complete.

The writer concludes his treatise with a few clinical remarks. In regard to abscesses, he says: "In incipient cases, promptly and carefully treated, they are unknown. In later cases, the presence of a recent abscess, if promptly evacuated, does not necessarily prevent a complete restoration of the joint. No abscess should be allowed to remain unopened a single day after its existence is discovered. . . . . . If an abscess is evacuated before it has exerted injurious pressure from accumulation, it seldom discharges more than a few weeks. The retaining an abscess is apt to cause necrosis of the bone with which it lies in contact, and the new disease thus set up is often much more serious than the original one in the joint."

Imperforate Anus.

At a recent meeting of the Paris Surgical Society, M. Verneuil called attention to the excision of the coccyx as a means of facilitating the performance of the operation for imperforate anus. Ten years since, an infant was brought to him with the anus in a state of natural conformation, but having an imperforation at the distance of about a centimetre. As the end of the gut could not be found, Littre's operation was performed. At the autopsy, it was observed that an excision of the coccyx would have enabled the rectal ampulla to be readily reached. Since then, M. Verneuil has performed such excision in the cases of five boys and one girl, with the result of saving five of them without resorting to Littre's operation.

The mere puncture of the ampulla he regards as dangerous, and only to be attempted as a means of diagnosis. Even when not indispensable, the excision much facilitates the operation and abridges its duration ; it also facilitates the suture of the intestine to the skin, thus preventing infiltration of fæcal matters and consecutive stricture. When the cul-de-sac of the rectum is placed very high, and is but slightly movable, it is to be feared that traction may lacerate its fragile parietes ; but, after excision of the coccyx, depression of the rectum is less necessary, for it can then be carried more backwards and fixed to the skin. This M. Verneuil did in three of his cases, and the anus thus carried back performed its function very well at a later period.

There is no incontinence of fæcal matter, there being rather a tendency to coarctation, which may be overcome by the daily introduction of the little finger. There are cases of imperforate anus, however, in which this excision is not required, and the portion removed is usually very small.

Pathological Anatomy of Hydrocele.

A communication on this subject, to the Société de Chirurgie, by M. Lannelongue, is given in the *Gazette Hebdomadaire*, Aug. 15, 1873.

In simple hydrocele of the tunica vaginalis, the relations of the epididymis to the testis are changed; the epididymis is separated from the gland, is placed above it, and elongates and spreads itself out on the surface of the tumor. When an effusion takes place into the tunica vaginalis, its two layers remain no longer in contact. The cavity enlarges at the expense of the parietal layer, which is stretched in all its parts. The testicle remains immovable, while the epididymis becomes more movable and floats in the cavity of the tunica. If the effusion increases, the epididymis is still further removed from the testis, and its shape is considerably modified. The middle part of the epididymis is more and more drawn to the parietal layer, while its head and extremity are in contact with the testicle. M. Lannelongue made these observations on five hydroceles of the size of a fist, in patients over forty-five years of age; he has dissected, in all, eighteen hydroceles. In none of these five cases were there spermatozoa, either in the seminal vesicles or in the epididymis, although the testicles appeared healthy. He quotes other observers who have noticed this absence of spermatozoa. M. Liégois published four observations taken from living subjects. In two cases of double hydrocele, there were no spermatozoa in the spermatic fluid. Another had an epididymitis on one side and a hydrocele on the other; an examination showed five to twenty spermatozoa in the place of one hundred and fifty to two hundred. M. Roubaud reports the case of an individual who had two hydroceles with no spermatozoa; after puncture, the spermatozoa reappeared. When the fluid collected again, the spermatozoa disappeared from the seminal fluid.

Hydroceles of small volume do not bring about complete suppression of the spermatozoa; but these corpuscles are altered in the seminal ducts. M. Duplay noticed this fact twenty years ago. Some of the spermatozoa were without a head, in others the tail was wanting. It is evidently a retrograde metamorphosis. M. Lannelongue does not think that this disturbance of function is due to an induration of the epididymis described by M. Panas as accompanying hydrocele. There is no such induration, but the fibrous envelope of the tail of the epididymis can be found to be considerably thickened after the hydrocele has been tapped. He recommends prompt treatment of the disease, to prevent these alterations from taking place.

Diagnosis of Stone.

Dr. Henry H. Head, physician to the Adelaide Hospital, reports a case, in the *Irish Hospital Gazette*, July 15, 1873, in which auscultation was employed as an aid to diagnosis of stone in the bladder. He says:—"I sounded his bladder, and was pretty sure I detected a stone, but did not think the evidence absolutely conclusive, when it occurred to me try auscultation, to see if it would assist my diagnosis. I accordingly applied one end of an India-rudder tube to the top of the catheter with which I was examining him, and the other to my ear, and at once heard, with greatest distinctness, the instrument strike the stone." He afterwards performed many experiments with substances of various sizes and degrees of hardness, placed in a bladder distended with water, and found the sense of hearing to be more delicate than the sense of touch. "Even a small piece of chalk, not larger than a pea, could be most easily detected; the slightest touch of the catheter or sound being conveyed to the ear, when it could not be recognized by the hand." The stethoscope "consists of a small vulcanized India-rubber tube, about eighteen or twenty-four inches long, to one end of which an ivory ear-piece is attached, similar to that used for ear-trumpets; and into the other end is inserted a metallic plug, with a tapering end protruding, which should be pressed tightly into the canal of the catheter; or, if a solid sound is used, the end of the tube, without the plug, may be fastened to it."

Treatment of Shortened Limbs.

Prof. Francesco Rizzoli, of Bologna, reports* a method for treating the lameness produced by a shortening of one inferior extremity, practised by him four times successfully, which consists in producing an artificial fracture of the healthy femur and allowing it to heal with a corresponding amount of shortening. The case reported was that of a girl, thirteen years old, who had considerable shortening from hip disease of the left side, the tip of her great toe scarcely touching the ground. The right femur was fractured by means of an "osteoclast," and the lower and upper fragments were pushed by one another sufficiently to make the two limbs of equal length. On the twentieth day, the patient was walking about. The author mentions deformities of the pelvis which arise from shortening of one leg, and quotes a series of cases, giving the measurements. A number of illustrations are also given.

Wanklyn on the Analysis of Tea.—Mr. Wanklyn, in a recent number of the *Chemical News*, records some results of interesting experiments in the analysis of tea. He thinks there is no doubt that tea is sometimes adulterated with iron-filings and other preparations of iron, but he wishes to call the attention of public analysts to the importance of investigating the ash of samples of tea, for he points out that, as tea-ash contains naturally 4 per cent. of oxide of iron, it is manifest that the mere qualitative detection of oxide of iron is no valid proof of adulteration. Zöller found the ash of tea-leaves to be 5.63 per cent. in pure tea, about which there could be no doubt; Mr. Wanklyn finds a very similar result—an average of 5.92 per cent. with ordinary commercial tea, absolutely dry. The method of investigation is very simple. "I am in the habit," he says, "of employing about two grammes of the dried leaves for the experiment. These I burn in a small platinum dish, and, when the resulting ash has become grey, I allow the dish to become cool, and weigh it together with its contents. The ash is then heated to boiling with a little water, and the solution filtered, and the filtrate evaporated to dryness in a small platinum dish; the resulting residue is then ignited, cooled and weighed. Thus I get determinations of 'total ash,' and 'soluble ash;' the 'insoluble ash' is found by difference." Treated in this manner, the ash of Paraguay tea is the only ash capable of being mistaken for the ash of tea; the total percentage of itself excludes all others. As an incidental circumstance, Mr. Wanklyn has been led to notice the great fragrance of a decoction of beech-leaves, and its possible use as a beverage.—*British Medical Journal.*

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* Schmidt's Jahrbücher, 1873, No. 5.

Bibliographical Notices.

Transactions of the New Hampshire Medical Society for the Year 1872. Manchester. 1872. Pp. 96.

Transactions of the Medical Society of the State of California during the Years 1871 *and* 1872. Sacramento. 1872. Pp. 228.

The only papers which possess other than local interest contained in the former of these Transactions, are the annual address and the annual oration. The address was delivered by the President, J. H. Hall, M.D., of Portsmouth, who undertakes, in rather a rambling way, to give some of the reasons why the medical profession does not receive from the public that favor and consideration which it merits, affirming that the profession suffers from the *mala praxis* of a certain class of precocious amateur physicians, who, having embraced that fashionable specialty, uterine disease, are inclined, in many instances, to subject their patients to the outrage of a needles examination. He denounces, therefore, quite bitterly, those physicians "who go about with a sable satchel under their arm, filled with speculums, sounds, tents, &c., hunting for an opportunity to make examinations per vaginam and explorations per speculum."

No better criticism could be made upon these loose reflections upon gynæcologists than that contained in the oration of Dr. J. W. Parsons, which followed the address. His subject, by a strange coincidence, was "The Necessity of recognizing Uterine Disease," and he adduces very strong proof that pelvic diseases are of very common occurrence with females, giving rise to a great variety of sympathetic symptoms and reflex disturbances, simulating, in many instances, organic and functional disease of remote organs. Dr. Parsons deems it the imperative duty of the honest physician to understand clearly the pathology and treatment of the female organs of generation. To ignore this class of affections, as is too often done by those whose limited educational advantages have not rendered them familiar with this specialty, will only tend to prolong the sufferings of many patients; and, when the ignorance or neglect of the physician is at length exposed, it cannot fail to redound to the injury of the delinquent attendant.

The Transactions of the California Society embrace a period of two years, and include no less than fourteen papers, in addition to the address of the President. In this address, the retiring President passes in review some of the more important questions which affect the medical profession at the present time, and touches upon the relations of medical men to irregular practitioners. In prosecutions for malpractice, he holds that the plaintiff should be obliged by law to give security for the payment of costs, in case he should fail to sustain his charges.

Dr. Gibbons manifested but little sympathy with the very general desire for reform in the constitution of the American Medical Association, believing that this Society, as at present constituted, does represent perfectly the rank and file of the profession. It is exactly suited to the tastes and habits of Americans, he says, and has much more influence over them than would be exerted by a body less democratic. He fails to appreciate the importance of a high standard of education, and ridicules the idea of sending our young men to Europe for study. So far from sympathizing with the attempt now being made at the Harvard school, and elsewhere, to elevate the standard of education, he follows in the wake of Dr. Yandell, and proposes to make even more easy the path to the doctorate. It is refreshing to turn from these pernicious views to the able paper of Dr. Edward R. Taylor, of San Francisco, entitled, "Some Thoughts on Medical Education," in which the importance of educational *thoroughness* is strongly urged. A low standard, he says, detracts from the dignity of the profession, offers a premium on mediocrity, and tends to quench the fires of honorable ambition. If, on the other hand, the standard is placed high, some will assuredly reach it, others will come within a short distance, while all will have accomplished a distance of which they would have fallen far short, had the educational requirements been less.

The Comparative Anatomy of Domesticated Animals. By A. Cheveau. Second Edition, enlarged and revised, with the assistance of S. Arloing. Translated by George Fleming, F.R.C.S. With 450 Illustrations. New York: Appleton & Co. 1873. Pp. 957.

The handsome volume before us is a translation of a new edition of Cheveau's well-known work. It is precisely what is needed, not only by veterinary surgeons, for whom it is especially written, but by comparative anatomists and physiologists. The author, taking the horse as his text, describes the different structures with the care and minuteness which is found in good text-books on human anatomy, stopping frequently to compare the parts with those of other domesticated animals, and, finally, with those of man. The style is very good; the author has, we think, hit the proper degree of accuracy of description, midway between the extremes of pedantic minuteness and of crudity. The animals considered are the dog, cat, pig, ox, sheep, goat, horse, ass, and the hybrids of the last two. The translator has omitted the remarks on the camel and rabbit, which is well in the case of the former, but hardly of the latter, as knowledge of its anatomy is useful to experimenters. We wish that the sections devoted to transcendental anatomy had been suppressed, for a book of this kind should be practical, and this one is so in every other respect. It provokes us to see the old archetype skeleton, now so shaky on its rusted wires, set up in the midst of a collection of valuable facts as something to be admired. This offends us, but it does not detract from the value of the book, for these passages may be easily skipped. The translation is very good, and the illustrations and binding admirable.

BOOKS AND PAMPHLETS RECEIVED.

Proceedings of the Medical Association of the State of Arkansas. Little Rock. 1873. Pp. 55. 8vo.

The Toner Lectures. Lecture I. On the Structure of Cancerous Tumors, and the Mode in which Adjacent Parts are invaded. By J. J. Woodward, Assist. Surg. U.S.A. Washington. 1873. Pp. 40.

Varicocele and its Radical Cure. By Octavius A. White, M.D. (Re-printed from the New York Medical Journal.) 1873. Pp. 13.

Transactions of the American Otological Society. Sixth Annual Meeting. Boston: Mudge & Son. 1873. Pp. 131.

Boston Medical and Surgical Journal.

BOSTON: THURSDAY, DECEMBER 25, 1873.

THE inquest at Lynn, in the case of Mrs Homan, is at last over, and the jury has rendered the following verdict:—

"That the said Elizabeth M. Homan came to her death at her residence, 7 Pleasant Street, Lynn, on the fourth day of December, 1873, between the hours of four and five o'clock, P. M., from the combined effect of sulphuric ether and nervous exhaustion, while undergoing a trifling surgical operation; and the jury further find that the etherization and operation were properly done, and that prompt, energetic and all necessary measures were employed to resuscitate the patient."

Instead of following the long and tedious account of the case, as elicited by the evidence, we will endeavor to state it briefly.

In the course of November, Dr. Bixby, of Boston, was called in consultation by Dr Graves, of Lynn, to see the deceased, who was suffering from some obscure pelvic trouble. On November 25th, Dr. Bixby, by means of the aspirator, detected and emptied a pelvic abscess. It filled up again rapidly, and, on December 4th, Dr. Bixby considered another operation essential to the safety of the patient, who was apparently in a very poor condition. Mrs. Homan was very unwilling to take ether, but tacitly consented to the persuasions of the physicians. Dr. Graves gave the ether, and Dr. Bixby attended solely to the operation. He punctured the abscess with a trocar through the vagina. Over a pint of pus had escaped, and more was flowing, when the patient was found to be dead. Here the evidence is somewhat conflicting: Dr. Bixby thinks he was the first to perceive that the patient was perfectly motionless, while Dr. Graves states that some five minutes after the discontinuance of the ether he noticed that the patient gasped, upon which he pulled the tongue forward, that she then gasped once or twice more, and expired; that he then notified Dr. Bixby. Every effort at resuscitation was made, and apparently well made, but artificial respiration and the battery were alike useless. After rather more than half an hour, they left the house and went for the Coroner. An irregular practitioner was then called in, who testified, as did also some of the naturally excited relations, that the pulse was still beating. We pass over this evidence without comment. Dr. Pinkham, the Coroner, who was the next to arrive, thought that life was extinct. The ether was examined by Dr. Wood, and found pure. The autopsy showed dermoid cysts in each ovary, chronic inflammation of the bladder, and enlargement of the uterus; between these two organs was the cavity of the abscess. The heart was weak, but not diseased.

We shall not discuss the Coroner's verdict, for which the medical community can hardly be considered responsible; although we might, perhaps, ask whether, in a case of extreme nervous exhaustion, with cystitis, the evacuation of more than a pint of pus from an inflamed abscess near the fundus of the uterus, can be considered "a trivial surgical operation." We pass directly to the main questions at issue.

This case suggests two questions: 1st. Did anæsthesia contribute to death? 2d. Was the anæsthetic employed better or worse than any other? To the first question, we reply that anæsthesia undoubtedly contributed to death—it often does. It is a depressing influence of great power, and in an operation of this kind a full dose is requisite to relax the muscles of the pelvis and thighs. Such a dose, in the case of a feeble patient, often demands great vigilance. Without intending any objectionable criticism, we think it fair to say that were the operation to do over again, the result might be more favorable. How often do we see weak patients barely carried through operations under anæsthesia by the combined skill of many experienced assistants? We here leave this part of the subject, distinctly recognizing that anæsthesia was, in this case, one of the causes of death; an occurrence familiar to all.

To the second question we reply as distinctly that in our belief ether was the best anæsthetic that could have been used. Had chloroform been employed, the patient would have had, not only the same chance of dying from the depressing influence of anæsthesia, but, also, the additional chance of sudden death from that peculiar and toxic property of chloroform by which it is possible for twenty drops, even when skilfully administered, to suddenly kill a strong and healthy man. This danger was avoided by the use of ether, which owes to the absence of this property its superiority to chloroform.

The approach of winter and of the holidays calls to mind the sports which are prominent features of the season. We are strong believers in recreation, especially in the open air, and if boys' games be rough, they are none the worse for it, provided they bring no great danger to the players or passers by. On the other hand, every citizen has the right to traverse the great thoroughfares without danger to life or limb, and, in support of this right, we protest against the extent to which coasting is permitted on the Common. No one who has seen the, at certain times, almost unbroken succession of sleds, rushing down the long, steep paths, will forget the spectacle. There is a fascination in watching the constant changes of the scene; to note the varieties of sleds, the toy-like one of the small boy, lately escaped from the nursery, the sharp and substantial "clipper" of the typical school-boy, and the great "double runner," carrying, with terrible velocity, its freight of five or six nearly or quite grown men. But there is a less pleasing picture, that of old men and young children, timid women and invalids, waiting to cross the track. The wise well know that the slightest error in estimating the opportunity, the slightest slip on the ice-covered ground involves serious harm, if not loss of life itself. The ignorant and stupid rush blindly on their fate, and appear as "items" among the accidents in the next morning's paper.

It may be said that this is out of our province; but if it be our duty to warn the public of impending epidemics, why not of accidents, as well? We will, also, suggest the remedy. The Common is large enough for all, but let coasting be permitted only in places where the sleds will not cross any important line of travel. The injury to the coasters will be more than balanced by the security of the passers, who have, at least, equal rights. We have, however, little hope of reform for the present. It was not till eighty millions had been lost by a single fire that the city seriously undertook to suppress the indiscriminate burning of gun-powder on the Fourth of July, and as, in this case, the loss is only of lives, we suppose we must resign ourselves to it. We may, however, petition the municipal government to establish one or more ambulances on the Common for the reception of those "butchered to make a schoolboy's holiday."

COUNTERFEIT DIPLOMAS.—The establishment on Pine street, Philadelphia, where medical degrees, regular and honorary, are conferred at so much a head, has been several times sharply overhauled, but has continued prosperous in spite of its overhauling. The greater the discredit into which the "American University of Philadelphia" has fallen at home, the greater the energy with which its business has been pushed at a distance, and the more lucrative its returns have been.

It must be allowed that there is a large element in human nature that likes to be humbugged; otherwise such frail securities as El Paso railroad bonds and Emma mining stocks would never have had a successful run in foreign exchanges, where nothing authentic was known about them, and from the nature of the case it was impossible that anything could be known. Upon this same credulity and conceit, manifested in a different way, the shrewd Yankee operators in university titles have played successfully, and they have found the market lucrative enough to pay for great risks at home. There is a good prospect now that this particular kind of swindling will be brought to an end. Responsible charges have at last been filed, and the "American University" will be called to answer upon what warrant its proceedings are based. The charges come, this time, from Germany, where the sale of bogus titles has been vigorously carried on through resident agents. The chief agency was in charge of "Dr.

P. F. A. Vander Vyver, LL.D.," Jersey, England, to whom all persons who wished to be promoted to any degree by this university, without being personally present, were to send their applications, and $120 in money—being the total cost of the diploma.

This eminent doctor of laws advertised extensively in German and other European papers, setting forth thc facility of getting degrees in this way, without the usual inconvenience of previous study, or even of a journey to America and back again. Here and there gentlemen of moderately good standing among scholars, have been tempted by Dr. Vander Vyver's prospectuses to bid for these paper titles, and have worn them with great complacency, till the swindle was fully explained to them. The authorities of Philadelphia, in company with the officers of the University of Pennsylvania, with which the bogus university has been confounded, are now at work, with the evidence of its deception in their hands, to bring its officers to justice, or, failing in that, at least to put a stop to their business.—*Boston Daily Advertiser.*

BELLADONNA PLASTERS IN VOMITING.—The *Medical Times and Gazette,* Oct. 11, 1873, states that, at a recent meeting of the Paris Therapeutical Society, Dr. Guéneau de Mussy read a communication on the good effects of belladonna plaster in the symptom of vomiting, whatever the nature of this may be. Bretonneau strongly recommended belladonna in the obstinate vomiting of pregnancy. He prescribed frictions of the extract diluted with water, which was rubbed into the epigastrium during several minutes two or three times a day. In many instances, this treatment relieved the vomiting when all other means had failed. For more than twenty-five years, Dr. Guéneau de Mussy has extended Bretonneau's treatment to all descriptions of vomiting, whatever the cause may be; but he has found that a plaster is a better excipient of the extract, allowing of its continuous application being conveniently made. It consists of a diachylon plaster and theriac plaster, of each two parts, and extract of belladonna one part, the plaster being twelve centimetres in diameter. It may remain applied to the epigastrium twelve or fifteen days without being removed. It has succeeded in a very great number of cases, either in entirely relieving vomiting or greatly mitigating it. Dr. G. de Mussy entertains great hopes of the benefit to be derived in the use of the belladonna plaster as a prophylactic and curative in sea-sickness.

CHOLERA DEJECTIONS AND VOMIT, in the Dresden Hospital, are received in a mixture of sawdust and charcoal, upon which petroleum is then poured, and the mass burned.

The Hospitals.

MASSACHUSETTS GENERAL HOSPITAL.

(*Saturday, December* 13, 1873.)

OPERATIONS were performed in the four following cases by Dr. Cabot:—Abscess of Gluteal Region, Contracted Knees, Tumor of Back, Cancer of

Cheek. In addition, an Abscess, a Fistula Ani and a Necrosis, which do not require comment.

Abscess.—Ten years ago, the patient noticed, after riding, a small, painful spot midway between the ischial tuberosity and the great trochanter of the right side. The tenderness subsided, but a small lump remained, which, eighteen months ago, again became painful, and has remained so to the present time. It was laid open freely. The quantity of pus was small, and it was enclosed in sponge-like cavities. The diseased tissue, on section, resembled that of a carbuncle.

Contracted Knees—congenital, in a child six years old. The joint had been manipulated, but no continued extension had been employed. Under ether, one leg was completely, the other partially extended, and splints applied. Dr. C. remarked that the condition of the joints was not due to tendinous contraction.

Tumor of Back—in a woman, without apparent cause, and of a year's duration. It was situated just below the inferior angle of the scapula, closely adherent to the fascia overlying the ribs, and also to the skin which was slightly ulcerated. It occupied an area two by three inches, and projected slightly from the surface. The growth was encircled by two semi-lunar incisions and dissected out. It involved the thickness of the latissimus dorsi muscle, and was, under the microscope, chiefly inflammatory infiltration.

Cancer of Cheek—in a man. It projected inward from the mucous membrane, in front of the ascending ramus of the inferior maxilla. The cheek was transfixed at a point opposite the last molar tooth, and an incision made extending to the commissure of the lips. The flap was reflected upward, so as to expose the growth, which was then excised. It proved to be epithelial in character, and was of the size of a walnut.

H. H. A. BEACH.

BOSTON CITY HOSPITAL.

LAST Friday, December 19th, the operations were as follows:—

Enucleation of the Eye was performed by Dr. Cheever, in the case of a man injured, six days before, by the accidental discharge of a fowling-piece. The patient received the full force of the explosion in his face, the muzzle of the gun being near his head. The shot were of the smallest size; none of them were found beneath the skin of the face, although fragments of powder had penetrated. A single shot had, however, entered the cornea, leaving a symmetrical wound of entrance, plainly visible. The removal of the injured organ was advised, to anticipate the appearance of consecutive trouble, both in this eye, and, sympathetic, in the other eye. The eyeball was found, on removal, to be much disorganized, the vitreous being the seat of an effusion of blood. The shot was not found; an opening in the sclerotic, posteriorly, showed that the wound was a penetrating one.

Dr. Williams operated for Extraction of Senile Cataract, the patient being a woman, 65 years old. The cataract was of the nuclear variety, and was of the kind commonly called "black," the lens being of a dark amber or mahogany color, which gave the pupil a clear appearance, instead of the usual grey or creamy opacity. Dr. Williams operated by the median flap method, making the incision upward with the narrow knife of Graefe, the wound being confined to the cornea. This method of operation was described by Dr. W. as having certain advantages over the peripheric linear extraction of Graefe, in that the wound was smaller and involved the cornea only, that the pupil was exposed to less violence in the extraction of the lens, and that there was less danger of separation of the retina and of subsequent sympathetic ophthalmia.

Dr. Williams removed from the conjunctiva of a child of five years a small growth of the size of a split pea. It had overlapped the lower and outer portion of the cornea, interfering with vision. Its dissection from the conjunctiva left the cornea perfectly clear.

A case of Compound and Comminuted Fracture of the Patella was presented by Dr. Thorndike, the patient having just been admitted to the hospital. The man, a mechanic, fell from a staging, a distance of thirty feet, striking on a pile of rubbish—stones and broken brick. The patella was comminuted, and at its lower, inner border, a compound opening appeared, through which the finger could be passed into the knee-joint. The ligaments within the joint were ruptured, and the insertions of the vasti muscles were lacerated. The joint was filled with blood. This condition of the knee, in connection with a complete dislocation upward of the scaphoid bone of the tarsus on the same side, determined that amputation of the thigh offered the least risk. To this operation, the patient would not consent. Dr. Thorndike accordingly enlarged the opening into the knee, removed several loose bits of patella, with some of the articular and inter-articular cartilage, and made a counter-opening on the outer side of the joint to allow free drainage. An unsuccessful attempt was made to reduce the dislocated tarsus.

On Tuesday, December 16, Dr. Cheever operated, before the medical class, for Strangulated Hernia. The rupture was oblique inguinal, filling the scrotum on the left side. It had slipped down from under a truss while the patient was at stool, on the previous Friday. Complete stoppage of the bowels and vomiting had continued since. The face was flushed, skin dry, abdomen tympanitic. After a moderate attempt at reduction by taxis, under ether, herniotomy was done. The sac contained a quantity of reddish serum. The hernia was of the large intestine, fringed with a good deal of fat in the appendices. The bowel was in fair condition. The stricture was cut upwards, and reduction was found very difficult. The gut did not contain air, but could not be folded in on itself with the finger. There were no adhesions. After the opening had been several times enlarged with the hernia-knife, the patient was inverted, and the hernia finally returned safely. The lower corner of the wound was left open.

Correspondence.

LETTER FROM MANATEE, FLORIDA.*

MANATEE, MANATEE CO., FLA., NOV. 19, 1873.

DEAR SIR,—I have been handed yours of the 3d inst., addressed to ———, of this place, with a request to answer the interrogatories contained therein, which I take pleasure in doing as satisfactorily as I can.

1st. Give a general description of the climate and topography of Manatee, Florida.

Ans.—The climate is warm and genial. During the summer, the thermometer ranges from 70° to 90° Fahrenheit, scarcely ever going above the latter in favorable places. Yet with whatever degree of heat we are visited in the day, the nights, almost without exception, are cool and invigorating, thus allowing the body to recover from any lassitude it may experience in the day. There is rarely a night during the summer but what at some period of it a blanket is comfortable to the sleeper, in a well ventilated room. During the winter and cold months of the year, the thermometer sometimes sinks low enough to give us a white frost, but very seldom to the freezing point; yet the winters are so mild as to permit the cultivation in open gardens, with little care, of the tenderest vegetables. The average temperature of the year is a little above 70 degrees.

Manatee village is situated on Manatee river, about six miles from its mouth, which empties into Tampa Bay, and about twenty-two miles from the Gulf of Mexico. The river is a beautiful sheet of water, about one mile wide at this place. The general surface of the surrounding country is flat, though the banks of the river between the village and its mouth vary in height from five to thirty feet, affording as beautiful sites for private residences or villas as can be found in the southern country.

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* This letter, sent us by an esteemed correspondent, was written at his request by a reliable observer.—EDS.

2d. Is the climate uniform, dry or moist?

Ans.—It is more uniform than any climate in which I have ever lived, or of which I am informed, and as dry as any climate could be with the same proximity to large bodies of salt water, possessing a genial moisture, which is a defence against, and palliation of pulmonic affections. From the first of November to the latter part of June, we have what might be called dry or seasonable weather; much of the weather being of that delicious, balmy character which is found in sunny Italy or the Grecian Isles, with now and then a boisterous north wind, prefaced with more or less rain, which lasts generally from twenty-four to thirty-six hours. From the latter part of June until October or November, we have what is denominated the rainy season, varying each year as to its length and the amount of rain that falls. Some seasons these rains are moderate; again, they inundate the country for a few days by their continuance and intensity. During the later spring and the summer months, we have a daily prevailing wind from the sea in the day time, and from the shore at night. The dews are not heavier, I think, than in the interior States of the Union, nor as heavy as I have seen in Texas, on its coast or in the interior, while fogs are very light and seldom seen.

3d. Is the climate free from malarial influences? Do chills and the various forms of malarial fever prevail at any period of the year?

Ans.—My own experience proves that our coast is freer from malaria than any section in which I have ever resided, to wit, Ohio, Georgia and Texas, while medical statistics prove that all types of bilious or intermittent fever are less severe and less fatal in proportion to the number of population than in any other State in the Union. There are, during the year, occasional cases of chills and other bilious fevers, but I think they are more the result of a disregard of the laws of hygiene than of any climatic influence.

4th. What is the character of the soil, sand or clay? Does water remain upon the surface after rains?

Ans.—The soil is sandy, emphatically sandy, often lying in strata of different colors, from whitish to iron-rust color. Clay is found only in small quantities, chiefly in the hammock lands, but not in quantities to give character to the soil. Water rapidly passes away after rains, remaining in depressions only when prolonged and drenching rains have inundated the land and saturated the soil.

5th. Are there any bodies of stagnant water in the neighborhood?

Ans.—The country is more or less dotted with stagnant ponds, some open, some filled with long grass, and others with a dense growth of bay, oak, water-bush, maple, ash, &c., and in their natural state furnishing a pure, soft, wholesome water, free from malarial exhalations and parasitic growths.

6th. What is the character of the drinking water? Is it free from lime and organic impurities?

Ans.—In the pine barrens, inexhaustible supplies of pure, soft water are found from five to eight feet from the surface of the ground, and, under favorable circumstances, wholesome and free from organic impurities. The water from the wells dug in the rich hammock lands, whose understratum is composed of various marls, is necessarily strongly impregnated with lime and is intensely unwholesome.

7th. What is the growth of the country—long-leaf pine?

Ans.—The general or principal growth of the country is long-leaf (yellow) pine and short-leaf (pitch) pine. The hammocks, which are exceptional, and not characteristic, are covered with red and white bay, ash, hickory, live oak, water oak, paw-paw, maple, elm, dogwood, magnolia, persimmon, wild peach, cabbage, palmetto, and other growths.

8th. What is the effect of the climate upon the lungs? Do patients suffering with phthisis pulmonalis improve in this climate?

Ans.—This section is visited, more or less, in the winter, by invalids suffering with pulmonary affections, and with good results by those who conduct themselves prudently, and who are capable or susceptible of improvement. We have a pure, soft, exhilarating air, ameliorative to the lungs. This statement is corroborated by the United States medical and census statistics. The census of 1860 shows that the proportion of deaths by consumption in the following States to have been—in Massachusetts, 1 in 254; Maine, 1 in 289; Vermont, 1 in 404; New York, 1 in 473; Pennsylvania, 1 in 380; Ohio, 1 in 878; Florida, 1 in 1,447. In this connection, it must be remembered that Florida has been the sanitarium of the Union, and that a majority of those dying with consumption in Florida are invalids in quest of health.

9th. What are the prevailing diseases?

Ans.—We claim a decided exemption from prevailing diseases. During the later fall and summer months, we have a few scattering cases of chills and bilous or intermittent fever, but forms of a typhus of severe type, or congestions of all characters, are of very rare occurrence.

10th. Please send any records of climate.

Ans.—There are many meteorological data taken here, and at other points of the State, both north and south of this place, as well as other valuable information about the State, found in pamphlets issued from the office of the Commissioner of Lands and Immigration, at Tallahassee. Some of the foregoing data come from one of the same. I endeavored, without avail, to obtain an extra copy to send you, but will write by next mail to Tallahassee, requesting copies of the two last issues to be mailed to you. The point "Piney Bluff," mentioned in your letter, is about fifty miles south of this place. The main land there comes abruptly upon the Gulf of Mexico, while the general features of the surrounding country, though somewhat elevated, are much the same with the rest of the Peninsula, with the same sandy soil, pure water, and growth of long-leaf and pitch pine.

I have endeavored to give you, in the foregoing answers, a true account of the climate and general health and topography of the country, as applicable to good locations in this section, and do not hesitate to say that such places can be selected as possess as great merit for health in a pure, wholesome air and wholesome water as can be found in the world. I came here a youth, in 1852, have since travelled from Connecticut to California, have resided in Texas, Ohio and Georgia, and nowhere have I enjoyed so good health or such exemption from bilious complaints as here, and, until last year, never had an hour's bilious fever engendered here.

This *western* coast has not received that attention from invalids and others in search of health and warm climates, as the *eastern;* yet I think, and it is the opinion of many having a knowledge of both, that it is superior, and only requires convenient routes and means of travel, with comfortable hotels, to develope the proof. It only requires a judicious system of railroads, bisecting and ramifying the peninsula, with a proper encouragement to immigration, to open and insure the development of one of the finest regions in the world, possessing no superior in the salubrity of its climate, no equal in the extent and variety of the productions of its genial and rich soil.

Respectfully yours, W. A. G.

TREATMENT OF ULCERS.

MESSRS. EDITORS,—Dr. White, in his valuable "Report on Dermatology," published in the JOURNAL for Dec. 11th (page 583), mentions a "new method for healing ulcers," employed by Dr. Nussbaum, the principle of which is so nearly identical with that embodied in the following quotations as to make Dr. Nussbaum's claim to originality in its employment doubtful, to say the least.

"Relieve the tension of the skin or other tissues, by making incisions at right angles with the line of tension." (Gay: *London Lancet,* June 18, 1853, p. 468.)

"Besides the above-mentioned circumstances, there is still another that impedes the healing of ulcers with greatly-indurated borders, that is that the healing, granulating surface and cicatrix do not diminish and thicken by contraction, because the firmness of the surrounding portion of skin permits no displacement; while, as you know, all granulating wounds decrease to about half their size by contraction, and hence the cicatrizing surface grows smaller, in many cases the granulating surface of these ulcers must cicatrize throughout its entire original extent, because it cannot contract. To render this contraction possible, deep incisions have been made through the skin around the ulcer, and these incisions have been kept open by the introduction of charpie. I have never seen any great benefit from this treatment. As a consequence of the rigidity, also, the new cicatrix is not sufficiently dense, and readily reopens, so that the ulcer once healed soon developes again. To guard against this, it is best to cover the cicatrix with wadding and apply a starch bandage. This dressing should be worn six or eight weeks, till the cicatrix is firm and well organized. I have followed this practice for a long time in all cases of ulcer of the leg, and have every reason to be satisfied with it." (Billroth: Surgical Pathology, Am. Trans., 1871, pp. 399 and 400.)

"In the worst cases, where all these means fail" (opium, pressure, blistering, &c.), "it is commonly because the base of the ulcer and the integuments surrounding it are so indurated and so adherent to the subjacent tissues that they will neither stretch nor slide towards the centre of the ulcer, even when healthy granulations form on it and would contract in developing into a scar. To remedy this hindrance of healing, it is sometimes useful to make incisions through the integuments, near and parallel to the margins of the ulcer, so that the gaping of the incisions may give opportunity for the contraction of the granulations on the ulcer." (Paget on Ulcers. Holmes's Surgery, 1871, vol. i. pp. 383 and 384.) H. H. A. BEACH.

Boston, *Dec.* 12, 1873.

UNUSUAL BEHAVIOR OF THE HEART DURING ETHERIZATION.

MESSRS EDITORS,—I do not know as you wish to hear anything further in connection with the subject of ether, but the following case, which came under my observation during the past week, presents some features which were of interest to me, and which, in an experience as House Surgeon in the Massachusetts General Hospital and in the cases of anæsthesia which it has been my fortune to see since that time, I have never noticed with the distinctness which this case presented.

A. R., 80 years old, resident of a country town near Boston, was operated on at the Eye and Ear Infirmary, in May, 1873, for cataract. Ether was administered and the operation performed without the slightest unusual incident. He went home, has since been well, and returned to the Infirmary last week to submit himself to the same operation on the other eye. As is my habit, when giving ether, I noticed the patient's pulse, and discerned nothing abnormal. This was at the moment when I commenced to etherize him, before he had inhaled the anæsthetic at all. After a few inspirations, I thought one pulsation of the temporal artery had not been present, but the pulse was again regular, and quite full, and I supposed I must have been deceived, when a second intermission followed. At this, I did not stop the etherization, but gave great attention to the pulse. In less than two minutes from this time the pulse was intermitting every fifth and sixth beat, the respiration being perfectly normal. The patient was still able to converse coherently and answer questions properly. I asked to have the surgeon called, at the same time removing the towel somewhat from the face, so that the etherization should remain *in statu quo*. The admission of air was followed by complete restoration of the pulse in less than a minute and a half, so that on the appearance of the surgeon no failure in its regularity was to be detected. At his request I renewed the etherization, with precisely the same effect on the pulse until it intermitted at every fourth or fifth beat, when I became somewhat anxious and removed the ether from his face. In about two minutes, the pulse was again perfectly normal, not losing a pulsation in 40 to 80 beats.

A consultation was then held by the surgeons present, and it was decided to again attempt the etherization. Precisely the same effects, in the same order, were observed by several of the Faculty of the Infirmary, and this continued until the removal of the anæsthetic from the face, when the pulse again became full and regular. During this whole process, the patient had not become unconscious, nor unable to answer questions properly, and declared that he felt perfectly comfortable. It was decided to attempt the operation without ether, and it was accordingly done. At the time of greatest suffering from pain, it was noticed that there was also a slight intermission in the pulse, but this was of very moderate degree, and may have been caused by the twitching of the patient.

Five days after the operation, as the patient was sitting quietly in his chair, examination of pulse showed one intermisson in twenty, twenty-seven and forty-nine beats, respectively. Pulse is sixty in the minute. Appetite is fair, strength good, patient is cheerful and happy.

I make no remarks on this case; in fact, I think it doubtful if it possesses sufficient interest to obtain a place in your columns; but to me the observation of the intermittence of the heart's action on administration of ether, and the increase and decrease of this symptom in a ratio exactly corresponding to the time the anæsthetic was applied, was a thing of the greatest interest. It may not be so uncommon, but to me it is a new experience.

Boston, Dec. 10, 1873. ALBERT N. BLODGETT.

ATWOOD'S QUININE TONIC BITTERS.

MESSRS. EDITORS,—I have received letters from several physicians of good repute, asking why my name appeared in print as having recommended a proprietary medicine, bearing the above title. Will you allow me to answer all such inquiries by one general statement.

I was not aware that my name appears in any such connection. If it does, it is without my consent. I know nothing of the article except its name. I never recommended its use. Yours truly,

CHARLES E. BUCKINGHAM.

53 *Worcester Street, Boston, Dec.* 12, 1873.

Obituary.

DR. W. H. ROCKWELL.

DR. ROCKWELL, the subject of this sketch, died on the 30th ult., after an illness and decline of more than eighteen months. He was a native of Connecticut and graduated at Yale College. His pupilage in a specialty commenced at the Hartford Retreat, under Dr. Todd, in the summer of 1827, he having received the first appointment as assistant physician in that Institution. He was associated with Dr. Todd until the death of the latter in 1833, and for several months afterward had charge of the Institution. He subsequently remained connected with the Retreat, the greater portion of the time until his appointment to the Vermont Asylum, although at one time engaging in general practice, and for a few months pursuing a course of theological study. He was appointed to the Superintendency of the Institution at Brattleboro', previous to its opening, in 1836, and was officially identified with it till August, 1872, when he resigned, by reason of disability,—the result of a painful accident three months previously. Under his direction and personal oversight, from its beginning with a donation of $10,000, and subsequent very limited State aid, the institution has attained its present capacity, and accomplished at the same time a work for humanity, creditable in comparison with the results of kindred institutions in other States, as will appear by its published reports.

Dr. Rockwell was for many years the veteran in his specialty, and the oldest superintendent of an asylum for the insane in the United States. For nearly half a century he was an indefatigable worker, and though less prominently identified with popular movements than some of his contemporaries, was no less alive to all measures of reform and in sympathy with progress. He was thoroughly practical, and compelled by circumstances to give personal attention to the details of his daily work. The institution he *created* (we use this word advisedly) is the monument he has left to attest his industry and to perpetuate his memory. His reports were uniformly brief and confined to the current results of the institution each year; but those who best knew him, especially those who were associated with him from time to time, realized the wealth of professional experience he possessed, and recognized his rare sagacity and practical discrimination.

Decision and force of character, great self-reliance, sound practical judgment and indefatigable activity, were his prominent characteristics; but through these the finer and nicer shades of intellect were ever visible. His points were positive, rather than negative. His religious faith was clear and decided, and by it his whole life was consistently shaped.

A quick and cultivated power of observation, and the constant and diligent study of human nature in all its varied and abnormal phases, rendered him sagacious beyond the average of men, and gave to his judgments a superior value, as was often remarked by his professional acquaintances. With active sympathy, and ready adaptation of means to ends, he at once gained the confidence of his patients, and retained it with singular facility.

In person, he was singularly tall and commanding, and by his presence as well as mental qualities, exacted respect.

It is to be hoped an extended memoir, embracing as far as possible the conclusions of his long experience, will be prepared for the benefit of the profession in the specialty.

Few individuals in any walk of life are privileged to enjoy so extended a period of active service, and few have left behind them more enduring evidence of practical usefulness. J. D.

DR. WILLIAM F. PERRY.

In the sudden death of Dr. Perry, Mansfield and vicinity have suffered an irreparable loss. He was born in Easton, Dec. 9th, 1809, and was the son of Dr. James Perry, a once well-known physician in that town. He studied medicine with Drs. Swan, of Easton, and Peck, of Foxboro', and attended two full courses of lectures at the Bowdoin Medical School, where he received his degree of M.D. in 1833. He subsequently attended one course of lectures at the Harvard Medical School in Cambridge, Mass., and became a member of the Massachusetts Medical Society, and continued such till his death. After practising in his native town two years, he was invited to settle in Mansfield. His first professional visit is dated May 24, 1835.

The first year yielded hardly enough to pay his board, but with his professional devotion and prompt and sympathetic attention to his patients, his skill finally commanded success, and he became a trusted physician, not in Mansfield only, but in all its vicinity, and was sought in consultation far and wide. He was a diligent student of medicine as long as he lived.

He always answered promptly the calls of the poor, and never enforced payment from those who could ill afford it; so that he lived straitened himself, while thousands of dollars due remain uncollected. Some eighteen years ago, in one of his midnight rides, he was thrown from his carriage and received an injury which he thought laid the foundation for heart disease, of which disease he suddenly died on Tuesday, Oct. 17th. He was sitting beside a sick child and before he had made the prescription he fell forward on the floor, and without a word or groan he instantly died. His funeral at his residence drew hundreds together to see once more the face which they had often so gladly welcomed as the signal of hope and relief.

Medical Miscellany.

HEADACHE.—Dr. C. C. Vanderbeck recommends the use of ergot in headache; thirty drops of the tincture every half hour, until relief is obtained. He regards it as a very useful remedy, though not a specific.

OVARIAN TUMOR IN A GIRL SIXTEEN YEARS OF AGE.—This case was noticed by Dr. R. M. Cooper. When first observed, the general health of the girl was good, and all the functions in exercise except the catamenia. Three successive tappings afforded but temporary relief, and she died without an operation at the expiration of eighteen months.

DISCHARGE OF ASCARIDES FROM THE URETHRA.—Prof. Dujardin reports the passage of three ascarides from the urethra of a man, 72 years old. The passage of these parasites occupied ten days, and occasioned the patient much suffering. The specimens are preserved in the anatomical museum at Genoa. *(La Nuova Liguria Medica*, No. 18, 1873.)

ABSCESS OF THE LIVER OPENING INTO THE ASCENDING CAVA.—This extraordinary lesion is reported by Dr. Leon Colin in *L'Union Médicale*, Aug. 5, 1873. Secondary purulent deposits had occurred in the lungs, which, causing a copious expectoration of pus, had during life led to the erroneous diagnosis that the abscess had burst into a bronchus.

RHEUMATISM AND GOUT. Dr. E. P. Townsend advocates the use of chloride of propylamin in these affections. The rheumatic cases yield, he says, in from three to twelve days, and the gout in ten. Under this treatment a recurrence of the attack, in inflammatory rheumatism, is rarely met with, and the other sequences are usually avoided, such as valvular disease, or pericarditis.—*Transactions of New Jersey Medical Society.*

ST. HELENA is recommended as a sanitarium for the Ashantee expedition. The climate of this island is represented as genial, equable and healthy, the temperature rarely exceeding eighty degrees in the shade, even in the valley, in which its one town, Jamestown, is built, while on the higher plains it usually ranges from sixty to seventy degrees. It has been used for many years as a place to which African cruisers are sent once a year to recruit the health of their crews.—*British Medical Journal.*

ACONITE POISONING.—A lady, aged 35, took by mistake twenty drops of the tincture of aconite root. She discovered her mistake shortly afterward, and, being very much frightened, swallowed a raw egg, and sent for a physician. Dr. D. McL. Forman reached her an hour and a half after the poison was taken, and found her with mind perfectly clear, complaining of an intense, burning pain over the stomach, dryness of the throat, stiffness of the tongue, and a tingling sensation over the whole body. Pulse 76 and full; respiration and pupils normal. For the next half hour, there was no change in her condition; but, at the expiration of this time, her pulse suddenly began to beat irregularly, and faintness with coldness of the extremities was experienced. During the next quarter of an hour, the pulse had become so feeble and irregular that it was scarcely perceptible; the surface of the body was cold and livid and the pupils dilated. In spite of stimulants, the pulse continued to grow weaker, until it could not be detected at the wrist, the patient continuing to complain of faintness and cold, and in this condition she remained nearly two hours before the radial pulse could again be detected. About five hours from the time of taking the poison, the physiological effects began to disappear, but the pulse continued feeble for the next two days, and dizziness was complained of whenever the head was raised from the pillow. It is worthy of remark that in this case the only changes in the pulse were irregularity and feebleness, the frequency of the pulse, when it could be felt at all, never falling below the normal standard.—*Transactions New Jersey Medical Society.*

HYPERIDROSIS.—Dr. W. G. Smith thus describes *(Irish Hosp. Gazette)* the immediate outbreak of the preternatural flow of sweat in a case of hyperidrosis. "On examining the skin with a pocket lens, some degree of hyperæmia was seen to develope, and this coincided with a sensation of heat and tingling. Presently, minute glistening specks appeared at the mouths of the sweat follicles; gradually, the miniature springs welled up, and, within five minutes, the palm was literally dripping with perspiration, and large drops would fall to the ground when the hand was turned edgewise."

CHLOROFORMING HORSES.—Prof. John A. McBride seeks to exonerate veterinary surgeons from the charge of wilful inhumanity to horses in neglecting to employ chloroform when operations are to be performed on them. He states that the chief reason why an anæsthetic is not used in horse-practice is, that while the animals are inhaling the vapor they struggle so violently that they not unfrequently break their backs. He asserts, moreover, that a blind horse is preferable to one who has been operated upon for defective vision. The usefulness of a horse is destroyed by partially restoring his sight, for, owing to his imperfect vision, he becomes addicted to shying, a habit that renders him a dangerous animal.—*British Medical Journal.*

HORNET STING.—In addition to the local irritation produced by the stings of bees, hornets and wasps, severe and even fatal results are sometimes known to ensue. In a case observed by Dr. R. M. Cooper, a lady, having accidentally approached a hornet's nest, was stung six times upon the crown of the head, through a sun-bonnet, and four times on the back of the neck. She suffered severely at the time from the stings, and was found by the physician an hour afterward, in a cold, collapsed state, with pulse thread-like and almost imperceptible. Though her condition appeared at first to be a critical one, under the influence of active stimulants she eventually rallied. Upon the following day, an intense itching was experienced over her whole body, which was found to be the seat of an erythematous eruption. This eruption disappeared at the end of thirty-six hours.—*Transactions of New Jersey Medical Society.*

MARRIED,—On the 18th inst., by the Rev. James Freeman Clark, Dr. Theodore W. Fisher to Ella Gertrude, daughter of Joshua W. Richardson, Esq., all of Boston.

DIED,—At Lynn, December 16th, of Bright's disease and pneumonia, Bowman B. Breed, M.D., aged 41 years.

MORTALITY IN MASSACHUSETTS.—*Deaths in eighteen Cities and Towns for the week ending December* 13, 1873.

Boston, 152—Charlestown, 12—Worcester, 21—Lowell, 18—Milford, 1—Chelsea, 7—Cambridge, 10—Salem, 6—Lawrence, 13—Springfield, 9—Lynn, 8—Fitchburg, 2—Newburyport, 7—Somerville, 5—Fall River, 21—Haverhill, 4—Holyoke, 5—Pittsfield, 3. Total, 304.

Prevalent Diseases.—Consumption, 55—scarlet fever, 20—pneumonia, 37—typhoid fever, 13—croup and diphtheria, 8.

GEORGE DERBY, M.D.,
Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, Dec. 20th, 115. Males, 59; females, 56. Accident, 2—abscess, 1—apoplexy, 2—inflammation of the bowels, 1—bronchitis, 7—inflammation of the brain, 4—congestion of the brain, 1—disease of the brain, 4—cancer, 2—cerebro-spinal meningitis, 3—cholera infantum, 1—consumption, 13—convulsions, 2—debility, 4—diarrhœa, 2—dropsy, 1—dropsy of the brain, 1—drowned, 1—diphtheria, 2—exhaustion, 1—scarlet fever, 6—typhoid fever, 5—disease of the heart, 10—disease of hip, 1—intussusception, 1—disease of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 14—marasmus, 3—old age, 2—paralysis, 2—pleurisy, 1—premature birth, 5—peritonitis, 1—puerperal diseases, 2—rheumatism, 1—scalded, 1—suicide, 1—tumor, 1—whooping cough, 1.

Under 5 years of age, 49—between 5 and 20 years, 13—between 20 and 40 years, 22—between 40 and 60 years, 15—over 60 years, 16. Born in the United States, 82—Ireland, 28—other places, 5.

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